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# USSR REPORT MILITARY AFFAIRS

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## MILITARY HISTORY JOURNAL

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Except where indicated otherwise in the table of contents the following is a complete translation of the Russian language monthly journal VOYENNO-ISTORICHESKIY ZHURNAL.

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## RYBKIN EXAMINES U.S. AS 'CONSTANT SOURCE OF MILITARY DANGER'

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 4, Apr 83 (signed to press 1 Apr 83) pp 3-10

[Article by Doctor of Philosophical Sciences, Professor, RSFSR Honored Scientist, Col (Res) Ye. Rybkin: "V. I. Lenin and the CPSU on Imperialism as a Constant Source of Military Danger"]

[Text] The question of the reactionary essence of imperialism which is presently, as in the past, acting as a constant source of military danger is exceptionally pertinent not only on a theoretical level, but also in practical terms. Mankind is presently living through what may well be the most disquieting period of its history. Under the conditions of the scientific and technical revolution, the aggressive imperialist circles have obtained weapons of enormous destructive force. In the event of their use, the peoples and nations are threatened with unprecedented victims and destruction. The USSR which possesses powerful military potential is the main impediment on the path of the warmongers. The Soviet Armed Forces have become a mighty factor of peace and security and a dependable means for checking the aggressive forces. "In the difficult international situation, where the imperialist forces are endeavoring to force the peoples into a path of hostility and military confrontation," pointed out the General Secretary of the CPSU Central Committee, Comrade Yu. V. Andropov, "the Party and the state will steadfastly defend the vital interests of our motherland, maintain high vigilance and a readiness to deal a crushing rebuff to any attempt to aggression."<sup>1</sup> The aggressors should know that in the event of the initiating of a war against the USSR and its allies, retribution is inexorable and it will inevitably overtake them.

Imperialist propaganda has not only concealed the true source of the military danger. In creating a myth about the "Soviet military threat," it has endeavored to deceive the masses of millions of people at various points of the world, in forcing on them the absurd idea about the desire of the USSR for aggression, expansion and the "export of revolution." This obliges all our ideological units to strengthen counterpropaganda and in a convincing and accessible manner to explain Marxist-Leninist teachings about imperialism as a constant source of military danger.

### **Lenin's teachings on imperialism as a source of military danger and their development by the CPSU.**

The main theoretical basis for studying the source of military danger is Marxism-Leninism as a whole and Lenin's teachings on imperialism, in particular. Military danger is an immediate, concrete manifestation of the action of the source of laws rooted in the socio-economic structure of imperialism.

With the appearance of an antagonistic class society based on private ownership of the means of production, war becomes an inevitable weapon of policy. "War," wrote V. I. Lenin in 1915, "is not a contradiction to the bases of private property, but rather a direct and inevitable development of these bases."<sup>2</sup> Later, having returned to this important idea, he pointed out that "private property has led and always will lead to war."<sup>3</sup> Precisely private property gives rise to the policy of aggression and militarism.

Thus, by the source of wars, one understands their fundamental causes brought about by the socioeconomic structure of the exploiting states and acting as the primary, causative forces of a war.<sup>4</sup>

The sources of the military danger are formed on the basis of the sources of wars, for the socioeconomic and political relationships which entail the sources of wars do not develop uniformly in all the capitalist countries. In the various states their action varies and depends upon the relationship of the internal and external political forces. For this reason, ordinarily the large imperialist powers are the sources of a military danger where the base and superstructure foundations of militarism are particularly developed while many other states can carry out a neutralist and moderate policy.<sup>5</sup> At present, the basic source of military danger is American imperialism which is supported by the aggressive circles of a number of capitalist states and which in turn fosters them.

In speaking about the basic traits of imperialism as the last stage of capitalism, V. I. Lenin pointed out that "imperialism...is marked by the least love of peace and freedom and by the greatest and ubiquitous development of the military."<sup>6</sup>

As V. I. Lenin pointed out in a number of his works, imperialism is a **constant source of military danger**. This pattern since it has arisen has not only not grown weaker, but has actually become stronger and **stems from the profound laws of imperialism's development**.

One of the most important such laws is the struggle for monopolistic superprofits. It would be wrong to assume that the reason for this is to be found solely in personal appetites and the greed of the representatives of monopolistic capital, although this undoubtedly does occur. The struggle for superprofits is an objective consequence of capitalist competition and a struggle for economic survival which is becoming exceptionally fierce in the age of the rivalry of world concerns and corporations.

The monopolistic bourgeoisie has obtained unprecedented profits from various wars and primarily the world wars as well as from the expansion of military production. Thus, the net profit of the American corporations during the years of World War II rose up to 55.2 billion dollars in comparison with the 19.5 billion dollars obtained by them in 1934-1939.<sup>7</sup> The profits have increased in a direct dependence upon the military expenditures of imperialism and have basically gone into the pockets of the monopolistic bosses. In the NATO countries alone, since the establishing of this aggressive bloc, the military expenditures have been over 3 trillion dollars.<sup>8</sup>

The struggle for superprofits has developed within the capitalist system in close relation to the law of uneven development of nations under imperialism and with the competitive struggle. At the beginning of the 20th Century, these interrelated processes led to the formation of the law of the struggle for world domination and all the basic goals of the so-called "Great Powers" since then have been linked to this. The struggle for world domination gave rise to World Wars I and II (although World War II also had another aspect and included the antisocialist aspirations of imperialism). "World domination," wrote V. I. Lenin,

"is, to put it briefly, the content of imperialist policy and the continuation of this is imperialist war."<sup>9</sup> This struggle for world domination under imperialism has acquired a substantive nature which is internally inherent to it. This is why imperialism has become a constant source of military danger.

The source of military danger--imperialism--in the 20th Century has undergone definite changes which could be, in the opinion of the article's author, conditionally divided into three stages. Periods can be distinguished within each of these stages.<sup>10</sup>

The first stage commenced with the growing of capitalism into the stage of imperialism (at the turn of the 20th Century) and lasted up to the Great October Socialist Revolution; the second was from the time of the victory of Great October up to the end of World War II; the third which started after World War II is still not over. At this stage the balance of forces on the world scene changed fundamentally in favor of democracy and socialism.

**The first stage** was marked by the unchallenged domination of imperialism throughout the world as well as by the fact that the actions of the aggressive circles in the imperialist states were directed against competitors and aimed at reapportioning an already-divided world. World War I was the culminating event at this stage.

Within the given stage, one must distinguish the period of the formation of military alliances, the assembling of the opposing forces for the war (approximately up to 1908-1910) and the period of immediate preparations and conduct of the war. At this time, **the main sources of military danger** were Germany and Great Britain, although all the Great Powers which comprised two opposing coalitions were equally interested in the war.

**The second stage** in the evolution of imperialism as a source of military danger can be characterized by a desire of the imperialist states to conquer their competitors and to stifle the overall class enemy, the USSR, and suppress the revolutionary forces in their own nations. This stage is divided into three periods. For the first, very brief period (1917-1920) there was a typical desire of the imperialists to suppress the socialist revolution at its very outset, or, as Churchill said, "to strangle the communist infant in its cradle." The crusade of the imperialists against the USSR (1918-1920), as is known, was defeated. But from this moment imperialist policy of struggling for world domination assumed an antisocialist bent.

The second period of this stage (1920-1933) was characterized by a concentrating of the source of military danger in the nations which were previously part of the Entente and partially in the United States, that is, among the victor nations in World War I. During this period, Germany was experiencing internal difficulties and did not represent a serious military danger while other competitors (Japan and Italy) were just gaining strength.

The third and final period in this second stage involved the coming to power of Nazism in Germany, the increased activity of Japanese and Italian militarism and World War II. In the 1930's, Nazi Germany and militaristic Japan became the **main** source of military danger. The ruling circles of Great Britain, France and the United States at that time were actually carrying out a policy of appeasement for the aggressive aspirations of the German Nazis and the Japanese militarists.

During the years of World War II, an anti-Hitler coalition was formed in which, along with the USSR, the United States and England acted against the vanguard of world reaction and the main source of wars of that period, Nazi Germany and its allies. Of course, the ruling classes of the United States and England did not defend the freedom and independence of the peoples of the USSR, Europe and other regions of the world. They were fighting for their survival. In this clash, the interimperialist contradictions assumed the upper hand and the interclass ones were temporarily shifted into the background. But not for long. After the defeat of the Nazi bloc, the political situation changed abruptly.

**The third stage** commenced immediately after World War II, in 1946, when with the defeat of Nazi Germany and militaristic Japan, the center of action for the main source of military danger shifted into the United States. American imperialism announced its claims to "world leadership" by which one understood the unchallenged domination of the United States in the capitalist world and the elimination of the world socialist system.

The third stage can also be divided into periods: the first or Cold War (1946 until the second half of the 1960's), the second of detente (the second half of the 1960's until the end of the 1970's), while the third commenced with the campaign initiated by the U.S. administration to return to relations of confrontation and an intensified struggle between the forces of detente and antidetente.

During the first period the U.S. ruling circles adopted a military-political doctrine of "containing communism" with the military concepts of "massive retaliation" or "flexible response," aggressive imperialist military blocs were put together, wars were started in Korea and Indochina, and attempts were made to stifle socialist Cuba. The temporary monopoly (up to 1949) and later the temporary superiority in nuclear weapons and the suppressive economic predominance throughout the nonsocialist world turned the heads of the U.S. leaders and strengthened their desire for world domination.

"Power has been entrusted to the United States," stated the then Secretary of State J. F. Dulles. The ideologists of American imperialism urged the "controlling of mankind and the forcing of the world to obey."<sup>11</sup> "...Victory will not be ours in World War III as long as communism has not been eradicated to a point where it would not return," stated hysterically one of the rabid proponents of anticommunism of those times, J. Kieffer.<sup>12</sup>

This period was characterized by numerous military actions which to a greater degree either directly or indirectly were caused by American imperialism and to a lesser degree by Anglo-French. The time of the ending of the first period was not the same for the various imperialist states. In the policy of the European capitalist nations, this was the end of the 1960's and in U.S. policy the beginning of the 1970's.

The second period of the third stage was marked by a phenomenon which was termed a "lessening of international tension."

However, even then the reactionary, aggressive circles of the United States and its NATO allies did not halt their attacks against detente and conducted preparatory work to undermine it. Our party saw this, it cautioned peoples against the danger and urged them to maintain the necessary vigilance.

Even in 1973, at the World Peace Congress L. I. Brezhnev emphasized that "we do not have the right to forget also that under the conditions of a lessening of international tension, a process is continuing and even strengthening and this represents the material preparations



for a world war."<sup>13</sup> "It must be clearly seen," he went on to say, "that completely concrete social groups, organizations and persons create a threat to peace."<sup>14</sup>

The Carter Administration and the "Reagan Team" carried out an abrupt about-face in the policy of American imperialism designed to openly prepare for World War III and leading to a fierce U.S. confrontation with the USSR. Under the conditions of a nuclear threat, this has given rise to a previously unprecedented dangerous situation.

**American imperialism—a source of military danger and the historical necessity of checking it.**

Thus, in the 1980's, a new period has commenced in the development of the aggressive forces of imperialism as a source of military danger with the United States as its center.

The reason for this is to be found in the unprecedented explosion of aggressiveness in American imperialism as a response to the change in the balance of forces in the world in favor of socialism, democracy and progress, as well as to the intensified internal U.S. contradictions, that is, between the U.S. desire for world domination and the increasing economic, political and moral crisis in the nation, the decline in U.S. prestige throughout the world, the drop of its share in world industrial production and exports and the dropping from first to tenth place for the standard of living and from first to seventh place in terms of the volume of per capita gross national product.<sup>15</sup>

In characterizing the particular features of the moment, the 26th CPSU Congress pointed out: "Adventurism, a readiness to wager the vital interests of mankind for the sake of its narrow selfish interests--this is what is particularly apparent in the policy of the most aggressive circles of imperialism. In demonstrating complete disregard for the rights and aspirations of the peoples, they are endeavoring to depict the liberation struggle of the masses of people as a manifestation of 'terrorism.' They have truly set the goal of reaching the unattainable, that is, to set up a barrier on the path of progressive changes in the world and to recover the role of the disposers of the fates of peoples."<sup>16</sup>

Of course, as usual, the aggressors constantly, including now, have concealed and do conceal their actions behind inventions about a foreign danger such as the myth presently being bandied abroad about the "Soviet military threat." However, the U.S. ruling circles speak more and more brazenly and cynically not about the "defensive" aspect of their plans, but about the offensive one. Incidentally, this can be seen from a number of planks in Reagan's pre-election campaign document. Here they are: "In international affairs war and not peace must be considered the standard"; "It is not enough to merely restrain the USSR. Detente is dead"; "The United States should take the initiative, otherwise it is lost"; "Either peace under Soviet conditions or the establishing of American power throughout the world. This is the alternative. It is time to take the decision, there can be no more delay."<sup>17</sup>

The words of many highly placed American leaders indicate that the aims of the American administration are becoming evermore aggressive. For example, on 3 August 1982, at a session of the Supreme Council of the Knights of Columbus, Reagan stated: "We are no longer adhering to a defensive position. For precisely this reason, when I recently spoke in the English Paliament, I called for a world-wide crusade for the defense of freedom and a global campaign to defend democracy."<sup>18</sup> Here there is scarcely no need to show that by "freedom" and "democracy" Reagan means nothing more than imperialism with its embellished facade which can scarcely conceal the exploitation of the workers, the ubiquitous

plunder and violence. This is clearly evident from the more frequent instances of the violating of human rights in the United States itself, by U.S. support for the Israeli aggressors as well as the dictatorial regimes in El Salvador, Chile and Guatemala, literally in all corners of the world.

At present, there can be no doubt that the militaristic boom which recently broke out in the United States and the new intensification of the arms race, the expenditures for which in 1981-1985 should increase by 2.2-fold in order to reach 303.9 billion dollars a year by the end of this 5-year period,<sup>19</sup> prove the desire of this power to achieve world domination. For this the overseas imperialists have set a goal of crushing or seriously weakening the Soviet Union and the other socialist countries, that is, those forces which are the main obstacle on the path to achieving their aggressive plans.

The drive of U.S. imperialism for world domination, for securely subordinating its allies to itself and for creating a "Pax Americana" is confirmed by the actual actions of the ruling circles in this state during the Falkland crisis, the Israeli war in Lebanon, the Iranian revolution, the political struggle over the Taiwan question as well as the factor of the existence of a broad network of U.S. military bases on foreign territory and so forth. All of this is aimed at carrying out the aggressive U.S. imperialist goals. For this reason, those who feel that in aiding the overseas military in "sealing off" the USSR they thereby defend their "freedom and independence" are profoundly confused. No! Having set out on such a path, they risk losing everything: both their liberty, the economic-political prospects of their country as well as the possibilities for the development of its culture.

One cannot help but point out that in certain instances, individual leaders and ideologists in the Western European states have condemned the overtly aggressive U.S. aspirations aimed at intensifying the confrontation with the USSR and supporting the Israeli aggressors in the Near East. Belgium and the Netherlands have acted against the deploying of the new American missiles on their territory in the near future.

But the leading capitalist nations in Europe, being themselves major imperialist predators, as a rule, actively support the aggressive course of their senior partner. In addition, the American ruling circles, in possessing enormous economic and military potential and a propaganda apparatus, are employing every means at their disposal to force the other capitalist nations to obediently follow aggressive U.S. policy.

The saving of mankind from the American threat is the prime task of modern international policy, since the danger of unleashing World War III is related primarily to U.S. aggressive preparations. The military policy of this state is based on the concept of achieving U.S. and NATO military superiority over the USSR and the Warsaw Pact members.

This concept pursues the goal of creating a new technical base for waging aggressive war, both world-wide and limited, in any region of the planet. It envisages the development of modern weapons capable of achieving success both in a surprise "first strike" as well as in an extended nuclear and non-nuclear war with the preliminary exhaustion of the USSR in a new round of the arms race. At the same time it is designed to extend American military pressure to all regions of the world. This is why the U.S. military programs envisage the modernizing of the ICBM fleet with the MX missiles capable of making accurate strike, the development of the new B-1 bombers armed with cruise missiles, the equipping of the fleet with more powerful missile-carrying submarines of the "Ohio" class with Trident missiles and a significant strengthening of the surface fleet, aviation, and ground

forces, particularly the Rapid Deployment Forces. The arsenal of chemical weapons is being constantly increased, the might of the combat-ready troop groupings and fleets is being increased, while the network of military bases aimed against the USSR and the nations of the entire socialist commonwealth is being improved. In violation of international agreements, the Pentagon has adopted a decision to militarize space. In the U.S. military programs, a special place is held by the deploying of medium-range missiles and cruise missiles in Europe in the aim of creating a possibility to shift the entire burden of waging a "border" nuclear war off onto Europe. This would make it possible for the United States (in the plans of their leading militaristic circles) to remain on the sidelines while the European powers, including the USSR, would be bled white in a "localized" conflict.

Based on the idea of "military-technical superiority," the new American doctrine is aimed at a surprise "pre-emptive" attack against the Soviet Union and the other socialist countries. This doctrine was set forward in a memorandum of the U.S. Secretary of Defense Weinberger in February 1982 to Congress and was approved by the latter. It envisaged "attaining the capacity to make a strike against the Soviet Union when and where Washington considers it advisable counting that the retaliatory strike against the United States will be less powerful than under other conditions."<sup>21</sup> On the basis of the memorandum, the Pentagon worked out a bulky document entitled "Directives in the Defense Area for the 1984-1988 Fiscal Years," where all the ideas of the doctrine have been developed and concretized.

In the military doctrine of "direct confrontation," as was pointed out above, a special place has been given to a "limited" nuclear war, however generally there can be no such war. This is a direct deception of the peoples. "Let U.S. imperialism start a nuclear war, for example, in Europe, and it at the very outset would lead to irreplenishable losses and the most fatal consequences for the countries located here, to the destruction of entire peoples and their age-old civilization," wrote the member of the Politburo of the CPSU Central Committee and USSR Minister of Defense D. F. Ustinov. "Moreover, the war inevitably and irreversibly would assume a universal nature."<sup>22</sup>

The Soviet Union and the other nations of the socialist commonwealth are struggling actively to prevent war and, regardless of the various clevernesses of bourgeois ideologists, in every possible way unmask the aggressive essence of imperialism. Acting in concert with them are the progressive, peace-loving forces of all nations and peoples. However, the ensuring of a lasting peace is not an easy matter. Here it is essential to recall the instructions of V. I. Lenin: "The person who feels that peace can be easily achieved and that it is merely a matter of mentioning peace and the bourgeoisie will present to us on a platter is a completely naive person."<sup>23</sup>

At present, along with the powerful forces in the socialist nations and the other peace-loving states which comprise the **external front for checking the warmongers**, there is also an **internal front for the imperialist aggressors**. On this front, the representatives of the strong anti-war movement are fighting for peace and detente in the capitalist nations. This movement brings together people who belong to all classes, including to the pacifist and realistically thinking bourgeois circles. The checking of the warmongers and the paralyzing of the aggressive aspirations of imperialism, as the experience of modern times indicates, become very effective with a unity of actions on the part of both fronts. In endeavoring to find a way out of the developing situation, the imperialist ruling circles are wagering on adventuristic decisions. An inclination for such irresponsible actions which are dangerous to the cause of peace is inherent to the present U.S. administration. Under

present-day conditions, when an enormous arsenal of modern weapons is concentrated in the hands of the ruling circles of the imperialist states, primarily the United States, such decisions by a handful of persons in power can lead to irreparable consequences for all mankind.

Thus, the entire history of the 20th Century shows that imperialism is a constant source of military danger which has directly or indirectly initiated at least 150 wars and major military conflicts. At present, U.S. imperialism has become the main source of military danger and it is preparing for a nuclear war which could destroy all world civilization.

In response to the aggressive thrusts by American imperialism, the CPSU and Soviet government have calmly and firmly conducted a policy of strengthening peace and security of peoples. At the same time, the USSR proceeds from the principle of equal security and does not recognize for anyone the right to military superiority which American imperialism is endeavoring to achieve.

Created under the leadership of V. I. Lenin, the glorious Soviet Armed Forces are making and will make their weighty contribution to checking the aggressive forces arising out of the constant source of military danger, imperialism. The high vigilance and combat readiness of the Soviet Army and Navy are an essential factor for the freedom and security of our motherland and the guarantee for peace throughout the world.

#### FOOTNOTES

- <sup>1</sup> PRAVDA, 16 November 1982.
- <sup>2</sup> V. I. Lenin, PSS [Complete Collected Works], Vol 26, p 353.
- <sup>3</sup> Ibid., Vol 40, p 180.
- <sup>4</sup> "Sovetskaya Voyennaya Entsiklopediya" [Soviet Military Encyclopedia], Vol 3, Voenizdat, 1977, p 632.
- <sup>5</sup> Ibid.
- <sup>6</sup> V. I. Lenin, PSS, Vol 37, p 248.
- <sup>7</sup> See: "O voyenno-teoreticheskom nasledii V. I. Lenina" [On the Military-Theoretical Heritage of V. I. Lenin], Voenizdat, 1964, p 43.
- <sup>8</sup> "The Arms Race: A Danger, Burden and an Alternative," Appendix to the Journal NOVOYE VREMYA, 1981, p 12.
- <sup>9</sup> V. I. Lenin, PSS, Vol 30, p 85.
- <sup>10</sup> The periodization proposed by the author for the evolution of the source of military danger in the 20th Century has been dictated by the subject of the given article and is founded on a rather extensive scientific base provided in many works by Soviet military historians and political scientists, in particular: "Istoriya vtoroy mirovoy voyny 1939-1945" [History of World War II of 1939-1945] (in 12 volumes), Voenizdat, 1972-1983; "Istoriya pervoy mirovoy voyny" [The History of World War I], Moscow, Nauka,

1975; "Voyenno-blokovaya politika imperializma" [The Military Bloc Policy of Imperialism], Voenizdat, 1980; P. A. Zhilin, "Problemy voyennoy istorii" [Problems of Military History], Voenizdat, 1976; "Strategiya imperializma i bor'ba SSSR za mir i razoruzheniye" [The Strategy of Imperialism and the Struggle of the USSR for Peace and Disarmament], Moscow, Nauka, 1974; "Protssess formirovaniya i osushchestvleniya vneshney politiki kapitalisticheskikh gosudarstv" [The Process of the Formation and Implementation of Foreign Policy by the Capitalist States], Moscow, Nauka, 1971 and others.

As for the boundaries between the periods within the stages, these are rather flexible and are not simultaneous in all regions; for this reason, further in the text the accent is put not on them, but rather on the presence of changes in the balance of forces and the degree of activity by the aggressive imperialist circles.

<sup>11</sup> See: PRAVDA, 21 August 1982.

<sup>12</sup> J. Kieffer, "Strategy for Survival," New York, 1953, p 278.

<sup>13</sup> L. I. Brezhnev, "Na strazhe mira i sotsializma" [On Guard for Peace and Socialism], Second Supplemented Edition, Moscow, Politizdat, 1981, p 312.

<sup>14</sup> Ibid., p 314.

<sup>15</sup> PRAVDA, 5 October 1982.

<sup>16</sup> "Materialy XXVI s'yezda KPSS" [Materials of the 26th CPSU Congress], Moscow, Politizdat, 1981, pp 20-21.

<sup>17</sup> PRAVDA, 5 October 1982.

<sup>18</sup> Ibid.

<sup>19</sup> "Otkuda iskhodit ugroza miru" [From Whence the Threat to Peace Derives], Second Supplemented Edition, Voenizdat, 1982, p 55.

<sup>20</sup> [Not in text.]

<sup>21</sup> PRAVDA, 12 July 1982.

<sup>22</sup> D. F. Ustinov, "Sluzhim Rodine, delu kommunizma" [We Serve the Motherland and the Cause of Communism], Voenizdat, 1982, p 49.

<sup>23</sup> V. I. Lenin, PSS, Vol 35, p 116.

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## COMBAT TRAINING FOR TROOPS DURING WARTIME DISCUSSED

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 4, Apr 83 (signed to press 1 Apr 83) pp 11-20

[Article by Doctor of Military Sciences, Col Gen M. Gareyev: "On the Experience of Troop Combat Training"]

[Text] In the prewar years, Soviet military science, on a basis of a Marxist-Leninist analysis of the experience of World War I and the Civil War and considering the further development of weaponry as a whole, correctly defined the nature of operations and combat actions in a future war. In the 1930's, in line with the economic and social changes and the growth of the technical equipping of the Red Army, the theoretical principles were elaborated for an operation in depth and the tactics of deep combat expressing the decisiveness of combat operations inherent to our army. "The troops in peacetime," pointed out M. V. Frunze, "should be organized and trained so as to be able to carry out the tasks of both the defensive and offensive. But they should be prepared first of all for the tasks of an active offensive nature...."<sup>1</sup>

As a whole, the headquarters bodies and troops were involved greatly and intensely in combat training. Although Soviet military science at that period proceeded from the view that in a future war the maneuvering forms of conducting combat operations would be combined with positional ones, in working out the methods for the operational and combat training of the troops and staffs, this was not fully considered. Many of the most complex questions of conducting an operation and combat, in particular defensive ones, were not worked out in all details. Little attention was given to the engineer organization of the terrain or to conducting combat operations at night.

It should be pointed out that virtually all the major exercises and maneuvers were conducted basically in the summer. In the wintertime the intensity of combat training declined somewhat. Not enough attention was given to exercises involving field firing and bombing. In a majority of the operations-level maneuvers, the command and staffs of the districts and sometimes the armies acted as the leadership and for this reason did not have practical experience in troop control and command in the course of army and front-level operations. For example, the 1935 and 1936 maneuvers in the Ukraine and the 1937 maneuvers in the Transcaucasian Military District were conducted, respectively, under the leadership of the commanders of the Kiev and Transcaucasian Military Districts.<sup>2</sup> The same was the case in other districts as well.

On the basis of the experience of the Soviet-Finnish War and the commenced World War II, the party Central Committee and the Red Army command adopted decisive measures to

improve the combat training of the troops and to bring this as close as possible to the conditions of combat reality. In the course of instruction, chief attention was paid to the tactical training of the company, the battalion and the regiment.

In virtually all the battalion and regimental exercises conducted in 1940, the questions of breaking through a strongly fortified defense were worked on. In the exercises in the Moscow, Western, Kiev and other military districts, the advancing subunits and units learned to fully equip the jump-off position in engineer terms and to attack the enemy after a real moving barrage, as well as to cross obstacle areas, to come out in the main defensive zone and break through it. Military games and command-staff exercises were conducted for coordinating the work of the staffs and for working on the questions of command and control on the level of the formations and operational field forces.

As a whole, over a short period of time, extensive work was done to improve the combat training of the troops. But the time remaining prior to the start of the war was too little to raise this up to the proper level. The treacherous attack by Nazi Germany on the Soviet Union interrupted the commenced work. However, the training of the millions-strong army which was created from scratch and armed under the very difficult conditions of those times could not have occurred without weak points. One has merely to recall that in 1935, 74 percent of the divisions were territorial ones. Just 2 years before the start of the war their changeover to a cadre system was completed and they were able to start regular combat training. Just before the war itself a large number of new formations and units was fielded in all the Armed Services. The significantly replaced command personnel was not sufficiently prepared.

All of this must be brought up merely to understand the specific reasons for the occurring oversights, to draw the necessary lessons and better understand in which direction troop combat training had to be improved during the war. All the more as the war from the very outset placed severe demands on the combat skills of the troops and disclosed serious shortcomings in this area. For example, certain formations and units still had not the necessary maneuverability and were poorly commanded. The questions of cooperation, particularly for the infantry for the artillery and aviation, had not been completely worked out. The combined-arms and artillery units did not have the necessary skills for combating tanks while the air defense units lacked the same against aviation. Certain commanders and staffs did not know how to organize combat on the terrain, to mass the men and weapons in the crucial sectors and command the troops in conducting maneuvering defensive actions.

The main thing was that the war commenced under a completely different strategic and operational-tactical situation than the one under which a majority of the exercises and maneuvers had been carried out. The troops had been trained mainly to advance, but they had to defend themselves and retreat. This again shows how important it is in peacetime not to overlook the fact that war is a two-sided phenomenon and for this reason one must not proceed merely from what is advantageous or desirable for us. It is essential to constantly consider that the enemy will endeavor to undertake those actions which we would expect least of all.

The war forced us primarily to incorporate a number of changes in the methods of conducting combat and an operation and to more thoroughly master the questions of preparing and conducting defensive battles and operations. On the offensive, it was essential to give up the excessive echeloning of the battle formations. The prepared enemy defenses began to be broken through by the more massed employment of tanks, artillery and aviation as well

as the utilization of large tank and mechanized formations and field forces for developing the tactical success into an operational one. The depth of the defenses and their engineer organization were greatly increased. The activeness of conducting defensive combat and an operation rose.

The on-going development of the methods of conducting combat operations during the course of the war and the significant addition of personnel to the army from the induction groups required a constant improvement in the combat skill of the commanders, the staffs and the troops. For this reason, in the course of the entire war intense combat training was carried out.

As is known, in the past during a period of combat operations the combat training of the troops did not halt, but history knows no other example when troop training was carried out in a fighting army over the entire war with such intensity and scope, with such purposefulness and results as in the Soviet Army during the Great Patriotic War.

The work of organizing the training of reserves was carried out particularly intensely during the first period of the war when the receiving of reserves by a front was basically carried out by deploying reduced (understrength) formations and forming new ones.

Just from 22 June through 1 December 1941, 291 divisions and 94 brigades were sent to the active fronts. In addition, in 1941-1942, the front received draft companies and battalions the personnel of which had been trained in reserve units. Each month, over 300,000-350,000 men were sent to the front as part of the draft formations.

Over the nation's territory, an extensive system of military training was organized, including: under Osoaviakhim [Society for Assisting Defense and the Aviation-Chemical Construction of the USSR] and Vsevobuch [Universal Military Training]; in the training centers and the reserve and training units; in the operational army. Of great importance was the Decree of the GKO [State Defense Committee] of 17 September 1941 on introducing compulsory military service in the nation for men from 16 to 50 years of age. For directing the training of reserve, under the People's Commissariat of Defense a Directorate of Universal Military Training was organized and in the oblast, kray and republic military commissariats, the appropriate departments. During the war, around 10 million persons underwent military training. In the aim of creating order in the system for organizing the formations and units, in July 1941, there was formed the Main Directorate for the Organization and Manning of the Red Army Troops (Glavupraform). This provided leadership and control over the organizing of reserves (with the exception of the armored and mechanized troops, the artillery and Air Forces) as well as over the training of the draft subunits, the reserve and training units on the territory of the military districts. In addition, the commanders of the armored and mechanized troops, the artillery and Air Forces had their own bodies for training the reserves.

In the operational army, from the second half of 1942, the formations and units which had suffered losses were not disbanded, but were withdrawn into the rear for manning up and reequipping. This provided an opportunity to maintain the control bodies which had combat experience, the backbone of the troop formations and restore their battleworthiness in a shorter time. The tank and mechanized formations turned over the surviving tanks to the units conducting combat operations and were withdrawn to the training centers where they received new combat equipment, brought up to strength and prepared for the forthcoming battles.



In the operational army, combat training was carried out most intensely during the period of stabilizing the front line or during a lull. Use was made of even very small breaks in conducting active combat operations. As was pointed out by Mar SU K. A. Meretskov, "the bitter experience...in November 1941 taught us a great deal. Even then, we had made it a rule: no matter how great the need was for troops, the received recruits and newly arrived units prior to combat were run through the training centers or directly in the formations were acquainted with the particular features of conducting combat operations...."<sup>3</sup> There were better opportunities for training in the formations and units which were in the reserve, in the second echelons or which had been withdrawn for bringing up to strength or for reorganizing. By 1 January 1942, for example, around a half-million persons were engaged in combat training just in the reserve and training units of the operational army. On 1 July 1943, there were eight combined-arms and two tank armies in the reserve of Hq SHC [Headquarters Supreme High Command] and preparing for forthcoming combat operations (basically exercises were being conducted); of these there were five combined-arms armies and one tank army in the Steppé Military District alone.

At the end of the war, certain reserve formations and units were reformed into combat ones and sent to the front. In these a whole series of tactical exercises was conducted and in the course of them chief attention was given to breaking through the defenses, to the crossing of rivers and to developing a rapid offensive. Combat training was also conducted with the Czechoslovak, Polish and other foreign formations and units which were organized on the territory of our nation.

A distinguishing feature of the combat training exercises conducted under front conditions was their purposefulness, concreteness and the bringing of instruction as close as possible to those conditions under which the troops would have to carry out the combat tasks. During the first period of the war, basic attention was given to training the troops, to the preparation and conduct of defensive combat, to destroying the tank troops which had broken through, to fighting in an encirclement and breaking out of it, the combating of tanks and aviation and in the last period of war, to the conducting of an offensive (the questions of breaking through the defenses and conducting a non-stop attack were worked on with particular care), to cooperation between the infantry, tanks and artillery in the course of an offensive, to firing on the move by the infantry and tanks, to sealing off the strongest strongpoints, dugouts, pillboxes, to the committing of the tank formations and units to a breakthrough and to rapidly developing the success in depth, as well as instructing the commanders and staffs in form troop control.

In preparing for an offensive in the immediate rear, approximately the same strongpoints were equipped as the enemy's and the troops trained in their storming and capturing. On the defensive, they systematically worked on the methods of repelling the enemy attacks, counterattacks and the maneuvering of reserves to threatened sectors. In preparing the troops for the forthcoming battles, particular attention was given to exercises.

As a rule, the battalion, regimental and divisional tactical exercises involved artillery and engineer units and other reinforcements which were to carry out the combat missions together. This provided an opportunity for the commanders of the cooperating units to achieve better coordinated actions in combat. Of great importance for the training and moral-combat tempering of the troops were the exercises involving field firing, attacking behind a rolling barrage, having the tanks roll over the infantry which was in trenches and ditches, the throwing of live grenades and the crossing of antitank and antipersonnel obstacles. L. I. Brezhnev in his book "Malaya zemlya" gives one of the examples of the combat conditioning and skills of the personnel: "On Tonkiy Cape in Gelendzhik, assault groups

were being trained; they were taught to jump into the water with machine guns, to rush up slopes, and throw grenades from awkward positions. The men mastered all types of captured equipment, they learned to throw knives and use their rifle butts, to bind wounds and stop bleeding. They remembered the code signals, they learned to load the drum magazines of the submachine guns with their eyes blindfolded and from the sound of the bullets to determine from where firing was coming. Without these skills, the daring assault and particularly the first nighttime engagement would have been inconceivable as everything had to be done in darkness, feeling one's way."<sup>4</sup>

All the exercises, including those in the deep rear, were conducted on terrain equipped in engineering terms for the defenses which the enemy could set up on the front. Thus, in preparing for the Belorussian Operation, the commander of the Second Belorussian Front in his order demanded: "All exercises are to be conducted on terrain which would conform fully to the coming troop operations with the complete building of the entire enemy defensive zone on it and an actual jump-off position for the offensive."<sup>5</sup>

The troops were trained on the basis of generalized combat experience. In this regard, a particularly great role was played by the orders, directives and instructions of the Supreme High Command and the General Staff as well as the commanders of the branches of troops.

The orders of the NKO [people's commissar of defense] No 306 on improving the tactics of offensive combat and troop battle formations and No 325 on the use of tank troops were issued in the autumn of 1942. Also of great importance were the orders on organizing an artillery and air offensive. The combat experience of the Soviet troops in the second period of the war was generalized in the draft of the Red Army Field Manual (PU-43). In 1944, the Field and Combat Infantry Manuals, the Manual on the Crossing of Rivers, the Manual on Troop Operations in Mountains, the Manual on Breaking Through Positional Defenses and other manuals and instructions on the questions of conducting combat operations and troop training were reworked or reissued. In the course of troop training, a great deal of attention was given to analyzing the conducted engagements and operations, to analyzing the positive experience, the most effective methods of conducting combat tasks and the reasons for the committed shortcomings as well as to studying the strong and weak aspects of the weapons and tactics of the Nazi troops.

In a majority of the fronts and armies, combat training in the course of the war was planned with equal care as in peacetime. Specific tasks were set clearly for each period of breaks between battles and for each month. Guidance documents on combat training were worked out following the results of troop combat operations. For example, prior to the start of the Eastern Carpathian Operation in the middle of August 1944, the Military Council of the Fourth Ukrainian Front worked out the Organizational Instructions on Preparing the Troops for Operations in Mountains and then the Instructions for Troops Operating in Forested Mountainous Terrain. These generalized the experience of combat operations in the Caucasus, the Crimea and the Carpathian foothills. In addition to these documents, the staffs of the front's artillery, engineer and armored troops worked out instructions on operations in mountains in terms of each branch of troops. In the directive on the preparation of the units and formations for the pending offensive in the Carpathians, the military council demanded that all subunits from the platoon to the battalion with reinforcements be trained in operations to capture heights during the day and at night, employing both a frontal offensive as well as envelopments and outflankings, and to move along paths and off-roads, through forested gorges, the slopes and crests of mountains involving the crossing of steep ascents. In all divisions, strongpoints were equipped on elevations similar to the type of enemy defenses and here all battalions and companies with their reinforcements were successively trained.

In the units and formations of the First Guards Army from 16 through 26 August, a 100-hour combat training program was worked out. The exercises were conducted over a 2-3-day period with the troops away from their positions. Long hikes in the mountains were organized as well as the storming of heights. Particular attention was given to the independent actions of small groups. A whole series of special drills and exercises was conducted with the artillery, reconnaissance, combat engineer and rear subunits and units.

In preparing for the Bolkhov Operation (1943), the rifle units, in addition to drills in the storming of strongpoints, participated in joint exercises with the tank brigades with which they were to advance. Prior to the Vyborg Operation (1944), exercises for the formations and units were conducted on prepared training fields in forested-swampy terrain with the equipping of man-made obstacles to a depth of up to 15 km. Prior to the start of the Belorussian, Lwow-Sandomierz, Iasi-Kishinev, Manchurian and other operations, for the forward battalions and units which were to conduct reconnaissance in force and break through the defenses, from 4-5 to 10-12 exercises were conducted involving all the attached and supporting artillery, engineer and other special units as well as aviation in a number of instances.

During the period of preparing for the East Prussian Operation (1945), exercises were conducted with the troops to break through a fortified area and for equipping this they used enemy pillboxes, captured combat equipment and man-made obstacles which had been taken by our troops. The captured tanks, weapons and other enemy equipment were widely used for designating targets on other fronts as well. In the exercises during the preparatory period of the Belorussian Operation, the battalions of the 4th and 42d Guards Tank Brigades which had received new T-34 tanks with 85-mm guns trained in firing at captured "Tigers" and "Ferdinands" from a direct laying range. The antiaircraft subunits trained not only in combating enemy aircraft, but also in firing at tanks and other armored targets. All of this strengthened confidence in our weapons and, as the subsequent combat operations showed, the men from these subunits boldly engaged the new enemy combat vehicles in a duel.

When time permitted, the conducting of tactical exercises was preceded by command exercises involving the officers in the field, demonstration exercises, military games, staff drills and command-staff exercises.

In preparing for the Vistula-Oder Operation, consideration was given to the presence of seven deeply echeloned defensive lines between the Vistula and the Oder. These lines, as a rule, were based on water obstacles. For this reason, particular attention was given to preparing the forward detachments for rapid operations and to their cooperation with the aviation in the aim of capturing these lines before the enemy could occupy them. The commander of the First Belorussian Front, Mar SU G. K. Zhukov, personally conducted a demonstration exercise with the forward detachments at which they worked out their actions in the operational depth.

On the staffs of the fronts, armies, divisions and regiments, the subjects of the exercises were planned rather rigidly. For the periods of preparing for an engagement or operation and for each exercise, a list of tactical tasks was strictly established and these the formations and units were to work through without fail. In preparing for the Belorussian Operation, the commander of the Second Belorussian Front, Col Gen G. F. Zakharov, ordered all the formations to conduct platoon, company, battalion and regimental exercises at least three times for each, and the battalion and regimental exercises after careful drills were to be conducted with field firing, involving the reinforcements and supporting units.

The combat training for the troops in the armies of the First Baltic Front was planned for 20 days. The formations and units which were in the first echelon were pulled back into the rear and trained under a 5-day program while the formations which had carried out a regrouping or had arrived from the reserve were trained under a 10-day one.

In one of the reports to the General Staff on the results of checking the organization of combat training in the 60th Army of the First Ukrainian Front it was stated that the combat training in the army staff "had been planned in accord with the instructions of the front's staff. Detailed instructions had been worked out on the combat training for the period from 15 May through 5 June and from 5 June through 1 July 1944. These along with the training orders which reflected the results of the course of combat training and set the tasks for the new training period were issued to the staffs of the corps and divisions.... Instructions for combat training by the army staff were worked out in detail with the indicating of the subjects, the hours for conducting the exercises and the questions to be worked through on each subject.... The corps staffs worked out training orders and supplements to the instructions on the combat training for the army staff...and issued these to the divisional staffs. The divisional staffs, in turn,...drew up programs and a plan for combat training on the basis of which the regimental staffs drew up their own combat training plans and exercise schedules...and issued them to the company commanders." <sup>7</sup>

In preparing for defensive operations in exercises, the questions of organizing the firing plan and the control of fire, the building of obstacles, the maneuvering of men and weapons and the making of counterattacks and counterstrikes were worked out most carefully. Particularly, many such exercises were conducted in preparing for the defensive operations at Kursk. For example, in March-June 1943, the basic content of troop training for the First, Second and Fifth Guards Tank Armies was instruction in the repelling of large enemy tank attacks, actions in counterattacks and counterstrikes and the rapid maneuvering of men and weapons to the threatened sectors. Considering that after repelling the enemy offensive the tank troops would have to advance against prepared defenses, they were also trained in breaking through defenses in cooperation with the infantry, artillery and aviation. The questions of coordination among the subunits, units and formations continued to be worked on in carrying out marches to the assembly areas.

The same careful and complete preparation of the troops for the forthcoming combat operations was carried out on all fronts. The success of many operations clearly showed of what great importance was the specific instructing of the troops directly on the eve of carrying out the combat missions.

The tactical exercises conducted under a front situation were basically one-sided, with the simulating of the enemy. This was explained chiefly by the fact that under a front situation, as a rule, there was limited time for troop training and for this reason they had to be trained only for the forthcoming battle while two-sided exercises were planned for the simultaneous working out of different types of combat operations. Moreover, many exercises were conducted with field firing. A significant amount of shells, mortar shells and cartridges was expended in them. For example, in the Fifth Guards Army in preparing for the Sandomierz-Silesian Operation, almost one-half a unit of fire was consumed. But this justified itself in combat.

Tactical exercises in the interior districts and sometimes in the front rear (for example, in the troops of the Bryansk Front in 1943, in certain formations of the First Ukrainian Front during the summer of 1944) and in the mechanized and tank corps were conducted not only

as one-sided ones, but also as two-sided ones. Most often this was done when it was a question of working out the methods of combat deep in the enemy defenses, in repelling enemy counterattacks, in a meeting engagement and other elements, when the instructing of the commanders, staffs and troops in actions under the conditions of a complex and dynamic situation assumed particular importance. Thus, in the instructions to the troops of the Bryansk Front, it was demanded that the subjects determined by the combat training program "be worked out as two-sided exercises and by meeting marches. The marches were to be conducted around circular routes, in gradually drawing the units into the marches and working through the tactical subjects."<sup>8</sup>

In the 100th Rifle Division of the 60th Army in the First Ukrainian Front in June 1944, a very interesting two-sided exercise was conducted with field firing using rifles, machine guns and the throwing of live hand grenades. The advancing and defending sides fired their machine guns and rifles upwards at an angle of 45°. The hand grenades were thrown from a range of 150 m away from the defending side. The report stated that it was carried out in an organized manner and there were no accidents.<sup>9</sup>

With the arrival of the 5th, 39th, 53d and 6th Guards Tank Armies and other field forces and formations in the Far East in 1945, the need arose of retraining the troops and staffs for actions in the new theater of war under the conditions of a mountain-desert and mountain-taiga terrain. For this reason, immediately upon arrival in the designated areas, intense combat training was organized for the staffs and troops of the First and Second Far Eastern and Transbaykal Fronts considering the experience acquired on the Soviet-German Front as well as the particular features of the terrain, the organization and tactics of the new enemy, the Japanese Army.

A particular feature in planning and organizing the Manchurian Operation was also that all the questions of preparing for the operation for the first time for the Soviet troops had to be settled under conditions where the USSR was not in a state of war with Japan. This impeded reconnaissance and the organizing of fire damage against the specific targets and combat operations generally. Considering this, a decision was taken to start the offensive operation without a preliminary artillery and air softening up, with a surprise nighttime attack by the reinforced forward battalions. Their task in the zone of the First Far Eastern Front was, by the unexpected crossing of the state frontier accompanied by the border troops, to seize the forward permanent Japanese installations before they could be occupied by the subunits defending them and brought to a combat-ready status.

The success of the offensive operation by the front depended largely upon the bold and daring actions of these subunits. For precisely this reason in preparing it, special attention was given to the practical working out of actions by these battalions. For example, in the 5th Army, the army commander, Col Gen N. I. Krylov, was personally involved in the training of the forward battalions.

With the officer personnel, on maps and terrain mock-ups, the following questions were worked out in detail: the procedure for the covert moving up of the battalions and their crossing of the state frontier in cooperation with groups of border troops who knew the terrain well; the methods of crossing obstacles, the destruction of the security outposts and the surprise capturing of permanent structures; the order of actions for the main forces of the first echelon divisions to exploit the success of the forward battalions, to support them with artillery fire and air strikes; measures to achieve concealment and surprise of actions.

Subsequently, the designated methods of combat operations were actually worked out with the subunits on terrain similar to that on which they would fight. For this, in each division training fields were set up which reproduced the Japanese strongpoints with all the obstacles, permanent firing positions and the security and defense system. Here for a week battle drill exercises were conducted during the course of which the most difficult actions were repeatedly worked through and the questions of cooperation between the subunits between the different branches of troops were carefully worked out.

Then over a period of 10-12 days, five or six integrated exercises (a majority of them at night) were conducted involving all the men and weapons participating in the combat operations. Each such exercise involved the commanders and staffs from the divisions and regiments, the commanders and staffs of the divisional and regimental artillery groups, the air spotters and the full complement of forward battalions with all reinforcements and groups of border troops. Particular attention was paid to the strict observance of the axes for moving up and attacking during the darkness, the concealment and surprise of capturing the major installations in the enemy defenses, at the skillful control of the subunits in combat, to organizing the actual calling in of artillery fire and supporting aviation, to repelling possible enemy counterattacks and the prompt exploitation of the successes of the forward battalions by the main forces of the first echelon regiments. In conclusion each division conducted an inspection exercise under the leadership of the army commander and here all the questions of organizing and conducting combat operations were checked out and finally set.

Such careful preparation of the troops, particularly the forward battalions, prior to the start of an operation, along with the other known factors, ensured the full success of combat operations. The surprise taking of the permanent enemy fortified positions was a success and this created favorable conditions for developing the offensive at a rapid pace and subsequently routing the Kwantung Army in a short time.

In the procedure for conducting the exercises during the period of the war, there were also certain particular features, including in the designating and use of umpires. Umpires were not always appointed for exercises conducted under a front situation. This was explained by the necessity of working out with the troops the specific methods of combat operations in accord with the designated battle plan as well as by the fact that immediately before battle the responsibility of the commanders for the training of subordinate subunits and units was so high that no need arose for additional supervision. Moreover, it was not always possible to take officers away from their units in a combat situation. The superior commanders directing the exercises relied on their staffs. Umpires were sometimes assigned to subunits the commanders of which did not have combat experience.

Thus, during the war, not only on the front but also deep in the rear, troop training was concrete and to-the-point. Each battle and each operation served as an irreplaceable combat school for the commanders, the staffs, the political bodies and the troops. In the course of the fierce engagements and battles against our motherland's enemies, the personnel of the Soviet Army underwent severe combat tempering and continuously improved their combat skill.

The rich experience of the Great Patriotic War has helped us in more profoundly understanding the developmental patterns in military affairs and to improve the training and indoctrination of the command personnel and the troops. Consequently, a profound analysis and creative employment of the conclusions from the experience of the Great Patriotic War are one of the most important successes for the development of Soviet military

science and art and for increasing the combat readiness of the Armed Forces at the present stage. Many methods employed during the war for organizing and conducting combat training have kept their importance now. These are primarily the forms and methods for bringing the exercises as close as possible to combat reality and the placing of high demands on the working out of all the methods of conducting combat as well as all the training questions on terrain equipped as a battlefield and considering the forthcoming specific combat task and tactics of the probable enemy. Here also we should mention the methods of the moral-combat conditioning of the personnel. Of particularly great significance is the experience of party political work and the mobilizing of the personnel to carry out those difficult tasks which must be carried out in the course of the exercises in preparation for combat operations.

The main thing is that the Great Patriotic War with unprecedented acuteness and obviousness showed how important is the level of troop combat skills, particularly by the start of a war, and what great weight this level has in the overall system of conditions which determine the combat capability of the Armed Forces. The lessons of the war clearly warn us against any underestimation of troop combat training and against any attempts to sidestep the requirements of combat reality. They reaffirm the timeliness of Lenin's words that "intense combat training for a serious war requires not a rush, not shouting, not a militant slogan, but rather extended, intense, stubborn and disciplined work on a mass scale."<sup>10</sup>

#### FOOTNOTES

- <sup>1</sup> M. V. Frunze, "Izbrannyye proizvedeniya" [Selected Works], Voennoye izdatel'stvo Narodnogo kommissariata oborony Soyuza SSR, 1940, p 240.
- <sup>2</sup> TsGASA [Central State Archives of the Soviet Army], folio 27977, inv. 3, file 871, sheet 315; inv. 4, file 260, sheets 227, 227 verso.
- <sup>3</sup> K. A. Meretskov, "Na sluzhbe narodu" [In Service to the People], Second Edition, Moscow, Politizdat, 1971, p 237.
- <sup>4</sup> L. I. Brezhnev, "Malaya zemlya," Moscow, Politizdat, 1979, pp 10-11.
- <sup>5</sup> TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 237, inv. 2450, file 4, sheet 28.
- <sup>6</sup> [Not in text.]
- <sup>7</sup> TsAMO SSSR, folio 236, inv. 2731, file 2, sheet 602.
- <sup>8</sup> Ibid., folio 202, inv. 30, file 2, sheet 23.
- <sup>9</sup> Ibid., folio 236, inv. 2731, file 2, sheet 605.
- <sup>10</sup> V. I. Lenin, PSS [Complete Collected Works], Vol 36, p 325.

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## ORGANIZATION OF AIR DEFENSE FOR MOBILE GROUPS OF ARMIES AND FRONTS DISCUSSED

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[Article by Candidate of Military Sciences, Docent, Senior Science Associate, Col (Res) I. Tormozov and Candidate of Military Sciences, Senior Science Associate, Col (Res) V. Tokarskiy: "The Organization of Air Defense for Mobile Groups of Armies and Fronts During Offensive Operations of the Second and Third Periods of the War"]

[Text] During the offensive operations of the second and third periods of the Great Patriotic War, successful actions by the mobile groups of the armies and fronts depended largely upon the skillful organizing of air defense. This was continuously improved in keeping with the quantitative and qualitative growth of the organic air defense weapons. The improvement here occurred primarily by the massing of antiaircraft fire, by the centralizing of control of the antiaircraft artillery (ZA) and by the organizing of clearer cooperation with the fighter aviation (IA). Even at Stalingrad, for covering the assault troop groupings against air attack, antiaircraft artillery groups (ZAG) began to be organized. Here one portion of the ZAG was assigned to cover the mobile groups. Thus, in preparing for the counteroffensive, in the 5th Tank Army and the 21st Combined-Arms Army of the Southwestern Front, using the TOE and attached air defense weapons, ZAG were formed consisting of an antiaircraft artillery division of the RVGK [Reserve Supreme High Command], four or five army MZA [small-caliber antiaircraft artillery] regiments and two separate RVGK SZA [medium-caliber antiaircraft artillery] battalions (in each of these armies). The ZAG were divided into two subgroups. One of them (the RVGK antiaircraft artillery division and the separate RVGK SZA separate battalion) was to be used for covering the first echelon divisions of the armies and for supporting the commitment of the mobile groups to the breakthrough, while the other (two-five army MZA regiments and one RVGK SZA battalion) was employed to protect the second echelon divisions of the armies and the mobile formations in the jump-off position against air strikes as well as for reinforcing their cover in commitment to the breakthrough and in operations in the operational depth.

The enemy air raids against the jump-off position and in the committing of the mobile groups to the breakthrough were repelled by the first subgroup and the antiaircraft weapons assigned from the second ZAG subgroup together with the front's IA. In the course of the offensive, the small- and medium-caliber antiaircraft batteries consistently moved up behind the advancing troops and ensured their continuous cover against air strikes. The average rate of movement for the antiaircraft units was low, some 3.5-5 km per hour. This was explained, in particular, by the lack of motor transport for the



antiaircraft units, by the virtual total absence of tracked equipment, by the poor roads and snow accumulations which at times led to their falling behind the covered troops.<sup>1</sup>

The covering of the mobile groups during operations in the operational depth was provided by the TOE antiaircraft weapons and by one or more rarely two MZA regiments which were attached from the army ZAG. Here the TOE weapons were ordinarily allocated on a battery basis (and sometimes on a platoon) to the troop columns. The attached MZA regiments were used differently. Some of them were assigned by battery to the tank brigades (the I and XXVI Tank Corps) or were directly under the corps artillery commander (the IV Mechanized Corps, the VIII and III Cavalry Corps). The army mobile groups, in operations in the operational depth were not covered by the medium-caliber ZA, although there was a need for this, as the Nazi aviation often attacked from altitudes beyond the reach of the MZA.

The fighter aviation fought the air enemy by two methods: by patrolling over the troops and over the approaches to them and by alert duty at nearby airfields. The fighters were given the right to choose the attack on any target while the ZA fired only at the aircraft which were not attacked by the fighters.

As the experience of combat operations at Stalingrad showed, the reinforcing of the tank (mechanized, cavalry) corps operating as mobile groups with one MZA regiment was not sufficient. For example, the VIII Cavalry Corps of the 5th Tank Army, reinforced by one MZA regiment, during the period from 21 through 26 November was subjected to continuous air strikes and as a result of this suffered heavy losses.<sup>2</sup>

One MZA regiment was unable to repulse the enemy air raids. But there was nothing to reinforce the antiaircraft cover for the mobile formations. The army ZAG which had been created to cover the assault troop grouping in the course of the offensive were unable to simultaneously cover the first echelon divisions and the mobile groups in their operating in the operational depth.

The experience of organizing air defense for the mobile groups indicated that each of them should have its own ZAG which without fail would include a SZA regiment so that the ZAG had the possibility of repelling enemy air raids not only at low, but also medium and high altitudes.

The quantitative growth of the ZA in the troops as well as the improvement of its organizational structure made it possible by the Kursk Battle to oppose the massed enemy air raids by massed antiaircraft fire of high density both on the defensive and on the counter-offensive as well as in the subsequent offensive operations of the fronts. In three fronts (the Western, Bryansk and Central), 12 RVGK antiaircraft artillery divisions were organized (each with three MZA regiments and one SZA regiment).<sup>3</sup> At the same time, the number of army and TOE MZA antiaircraft regiments (batteries) was increased in the formations of the combined-arms and tank armies. This made it possible to reinforce the tank armies operating as mobile groups of the fronts with one (the 3d Guards Tank Army and the 2d Tank Army) and sometimes with two (the 1st and 5th Guards Tank Armies) RVGK antiaircraft artillery divisions. The first echelon corps which had one TOE MZA regiment each were covered additionally by another two MZA regiments from the antiaircraft artillery division while a third MZA regiment and a SZA regiment from the division were used to reinforce the cover for the basic army grouping in developing and conducting combat operations in the operational depth.

In the Battle of Kursk, the tank armies and corps were reinforced with ZA either directly in their committing to the breach (the Western and Bryansk Fronts) or before the start of the offensive (the Central and Voronezh Front). In the first instance, the ZA, as a rule, did not succeed in moving promptly and become incorporated in the tank columns of the mobile groups which were rapidly entering the breach, but rather lagged behind them. In the second instance, the necessity was eliminated of removing the antiaircraft units from the covering of the formations in the combined-arms armies and shifting them to cover the tank (mechanized) formations of the mobile groups in being committed to the breach. The early reinforcing of the mobile formations with ZA proved fully effective and subsequently was established in the official instructions on organizing air defense for the mobile groups of the fronts.

An antiaircraft artillery division which was assigned to a tank army in essence represented an organized ZAG having antiaircraft machine gun subunits, units of small- and medium-caliber antiaircraft artillery, their own TOE headquarters bodies and equipment ensuring centralized control over all the army antiaircraft weapons.

In deploying the army in the area of the commitment to the breach and in the operational depth, the MZA regiments from an antiaircraft artillery division were positioned in one or two echelons (usually two MZA regiments in the first and one in the second). The SZA regiment was positioned in two lines of batteries and reinforced the cover against air strikes for the army troops in the main sector at medium and high altitudes. A division's deployment front was up to 8-15 km and in depth up to 7-10 km.

The battle formation of the ZA units which covered the first echelon tank corps of a front's mobile group (for example, the 3d Guards and 2d Tank Armies of the Central Front) during their deployment for commitment to the breach and on the lines of encounter with the enemy in the operational depth was echeloned. The antiaircraft machine gun companies fought with forward detachments, the MZA batteries of the first line followed the tank and self-propelled artillery subunits, the batteries of the second line were in the battle formations of the motorized rifle units while the SZA batteries were in the areas of the reserve and the artillery positions. Such a procedure for employing the ZA was established by the instructions of the deputy air defense artillery commander of the Central Front of 21 July 1943.<sup>4</sup>

The experience of conducting air defense for the mobile groups in the course of the Kursk Battle convincingly showed that the antiaircraft units fighting in the battle formations of the tank and mechanized formations should have antiaircraft artillery self-propelled mounts (SZU) capable of moving and fighting against the air and ground enemy along with the covered tanks. Proposals on the need to employ self-propelled ZA were made in the reports from numerous front artillery commanders.<sup>5</sup>

In the offensive operations of 1943, the ZA cover for the mobile groups of the fronts was provided in close cooperation with the IA. The IA operations assumed particularly great significance in the committing of the tank armies to the engagement for completing their breakthrough of the tactical defensive zone, when the mobile formations became the main objects of Nazi air strikes and particularly needed a dependable air cover. A large portion of the IA from the front air armies was employed to protect the tank armies against air strikes. In the Orel Operation, for example, the 3d Guards Tank Army of the Bryansk Front in being committed to the engagement and in opening up the breach in the defenses was covered by 200 fighters from the 15th Air Army. In the Belgorod-Kharkov Operation,

over 50 percent of the fighters from the 2d Air Army were involved in the committing of the 1st and 5th Guards Tank Armies of the Voronezh Front to the engagement.<sup>6</sup>

After the mobile groups had reached the operational depth, ordinarily one fighter air division was assigned to each of them for a cover. The basic method of covering was fighter patrolling over the troops of the mobile groups. The patrolling areas were designated outside the firing zones of the ZA. Nevertheless, the fighters operated freely in the zone of antiaircraft fire while during this time the ZA halted its fire against the targets being attacked by the fighters or conducted interdictory fire against the enemy aircraft attacking our airplanes.

Thus, the experience of organizing air defense for the mobile groups of the fronts in the Kursk Battle showed that it should be carried out ahead of time, prior to the start of the offensive in accord with the basic principles established in the operations in terms of the men and equipment, namely: by the massing of the ZA for covering the main forces of the mobile groups during the preparatory period of the operation, during their commitment to the breach and in operations in the operational depth; by the broad maneuvering of the antiaircraft units (formations) and the IA in the course of the operation; by close cooperation of the ZA with the IA and covered troops. These principles were strictly followed in the subsequent offensive operations in organizing air defense for the mobile groups of the fronts.

During the third period of the war, the reliability of air defense for the mobile groups was increased due to the even greater massing of the ZA and IA in covering the main forces, by improving the combat employment of the organic air defense formations and units, by better organizing reconnaissance of the air enemy, warning the troops of this and by better cooperation with the IA of the air armies.

In the Belorussian Strategic Operation, there was the characteristic and instructive fact that of the four army mobile groups, two (the II Guards and XI Tank Corps) as well as all the mobile groups of the fronts were committed to the engagement after breaking through the tactical defensive zone. These were reinforced with ZA ahead of time, in the preparations for the operation, and their committal to the breach was supported by ZA cover from the main groupings of the combined-arms armies in the zones of which they were fighting as well as the IA from the air armies of the fronts. For example, the mobile groups (the 2d Tank Army and the 5th Guards Tank Army) of the First and Third Belorussian Fronts, in having from three to five TOE MZA regiments, each received an additional RVGK antiaircraft artillery division. The TOE and attached antiaircraft weapons of the mobile groups were organized into ZAG which were headed by the commanders of the antiaircraft artillery divisions.<sup>7</sup> This made it possible to centralize control over the fire and maneuvering of the army ZA. Also effective was the assigning of one of the regiments to the ZAG commander as a maneuverable reserve (the 2d Tank Army of the First Belorussian Front).

Particular attention should be paid to the experience of organizing air defense for the mobile groups (the 3d Guards Tank Army and 1st Guards Tank Army) of the First Ukrainian Front in the Lwow-Sandomierz Offensive Operation, where upon the instructions of the front's commander, the air defense for the mobile groups was planned by the artillery staffs<sup>8</sup> of these groups together with the air defense sections of those combined-arms armies in the areas of which they were to be committed to the breach. The general air defense plan for the fronts envisaged the setting up of a single system of antiaircraft artillery cover for the combined-arms armies and mobile groups of the fronts in the

committing of the latter to the breach (for example, the 60th Army and the 3d Guards Tank Army). Air defense for the mobile groups was planned by periods for the entire operation: in the assembly and waiting areas; in the jump-off position and in breaking through the enemy defenses; in the commitment to the breach and in operations deep in the defenses. For each period the following were established: the objects to be covered; the involved antiaircraft formations (units) and their tasks; the procedure for conducting reconnaissance of the air enemy and warning the troops of the mobile group about this; the procedure for cooperation and the maintaining of contact; the preparation times; the persons responsible for air defense of the troops (installations); the maneuvering of the ZA in the course of the operation in the aim of strengthening the cover for the mobile formations when they were operating in the operational depth away from the combined-arms armies.<sup>9</sup>

For covering the mobile groups in the assembly areas, in the jump-off position for the offensive and for the committing to the breakthrough, the ZA was organized into ZAG. In the 3d Guards Tank Army, the ZAG was created from five TOE MZA regiments under the leadership of the commander of the army air defense regiment, while in the 1st Guards Tank Army it was formed from two TOE MZA regiments and an attached RVGK antiaircraft artillery division under the leadership of this division's commander. The tank armies were committed to the breach in the zones of the 60th and 13th Armies, respectively. In each of these ZAG were operating consisting of two-four TOE MZA regiments and an attached RVGK antiaircraft artillery division.<sup>10</sup> During operations in the operational depth, control over the ZA for the mobile groups was decentralized. Cover for the mobile groups was organized with particular in their moving up and commitment to the breakthrough. For covering the breakthrough area to the greatest depth, the antiaircraft weapons of the 60th and 13th Armies in their initial positions were brought as close as possible to the forward edge. Prior to the start of the moving up, all of the TOE and attached ZA of the tank army was assigned to the formations and by the moment of the move-up was incorporated in their march columns ready to fire on the move and from brief halts. In setting the tasks for the commanders of the antiaircraft regiments, the object to be covered was indicated as well as with whom and with what means contact was to be maintained, the ready time, the axes of the move and the cooperation procedures with the IA and covered troops. In being committed to the breakthrough, each tank and mechanized corps in the first echelon of the tank army was covered by two or three MZA regiments from the ZAG.

The antiaircraft regiments operated in two groups of batteries on one sector at a distance ensuring control over them by the regimental commander and staff. The antiaircraft batteries which covered the peak tank subunits followed behind them while the batteries covering the main forces were at the head of the columns ready to fire on the move. The antiaircraft batteries designated to reinforce the cover for the troops on threatened sections of the routes (crossings, narrows, defiles, coming out from a forest) took up firing positions, as a rule, before the beginning of the passing of the columns. In bypassing the columns, the antiaircraft batteries were allowed to go first. The commanders of the covered units (subunits) helped them in crossing difficult areas of the route, preventing them from falling behind the troops. The ZA fired at enemy ground targets only for the purposes of self-defense and repelling enemy counterattacks when there were not enough other weapons and enemy aviation was not operating in the air.

The experience of organizing and conducting air defense for the mobile groups in the offensive operations of 1944 was generalized and reflected in the Instructions on the Combat Employment of ZA put into effect by an order of the artillery commander of the Soviet Army of 18 January 1945. This document stipulated that the areas of the front in which

the mobile groups were to be committed to a breach were to be covered by the antiaircraft weapons of the combined-arms armies which were breaking through the enemy defenses. All the TOE antiaircraft artillery as well as that attached to the mobile groups by the moment of the moving up was to be allocated to the troop columns and be incorporated in them in the approach-march formations of the units. In exceptional instances the MZA batteries were to be deployed not far from those columns with which they should enter the breach. With the beginning of the movement of the mobile groups from the jump-off regions, the ZA was to move up as part of the columns without halting for firing on enemy aircraft. The ZA of the mobile groups fully assumed the duties of covering the mobile formations only when they had moved beyond the zones of antiaircraft fire of the combined-arms armies. The basic task for the ZA attached to the mobile formations during operations deep in the enemy defenses was to cover their main forces.

As was already pointed out, large IA forces were involved for protecting the mobile groups of the fronts against air strikes during the operations of the third period of the war. The fighter subunits following a previously compiled schedule patrolled over the areas of operations of the mobile groups and over the approaches to them. This provided an opportunity to intercept enemy aircraft as they approached our troops. The groups on patrol when necessary could be reinforced with the fighters which were in a status of "airfield alert."

Cooperation between the IA and the ZA in covering the mobile groups against air strikes was provided by allocating efforts between them according to altitudes and headings of enemy air operations. Uniform cooperation and identification signals were established for all the troops and aviation. In a zone of antiaircraft fire the fighters were permitted to attack any target with the preliminary giving of the appropriate signal, but this right was no longer unlimited as was the case previously. The ZA had the right to fire at groups of enemy aircraft if individual fighters were attacking them.

In the 1945 operations, under the conditions of the concentrating of the basic efforts of the enemy air forces against the tank armies and mechanized corps, dependable air defense was achieved by a decisive strengthening of the mobile small- and medium-caliber ZA groups, by utilizing large IA forces for the cover, by centralizing control over the combat operations of all men and weapons and organizing close cooperation between them as well as by improving reconnaissance with the utilization of radar. This was the case in the Vistula-Oder, Berlin and other operations.

For example, by the start of the Berlin Operation, the First Belorussian Front had 13 RVGK antiaircraft artillery divisions while the First Ukrainian Front had 9 of them and 20 army and corps MZA regiments.<sup>13</sup> This made it possible to organize the cover for each tank army in the preparations for and in the course of the operation using from 3 to 5 TOE MZA regiments and 1 attached RVGK antiaircraft artillery division. The tank armies were committed to the breach in the areas of the combined-arms armies where, in addition to their TOE antiaircraft weapons, there were also 1 or 2 attached RVGK antiaircraft artillery divisions. The ZA density in the area where the 2d Guards Tank Army was committed to the breach in the area of the 5th Assault Army of the First Belorussian Front was 24 guns per kilometer of front, and in committing the 4th Guards Tank Army to the breach in the zone of the 5th Guards Tank Army of the First Ukrainian Front, some 27 weapons per kilometer of front. In addition, in commitment to the engagement and in operations in the operational depth, each tank army was covered by the forces from 1 fighter air division to a fighter air corps from the front air armies.

The first echelon corps from the tank armies in the operational depth were covered by two or three MZA regiments. The regiments were assigned to the brigades and operated, as a rule, in two groups of batteries in one sector and in initiating combat with the enemy were concentrated for covering the main forces of the formations. This made it possible for them to fire on each target with three or four batteries. The effectiveness of the ZA combat operations in covering the tank armies can be seen from the results. Thus, over the period of the joint operations of the ZA of the 2d Guards Tank Army and the 5th Assault Army, 88 enemy aircraft were destroyed while the antiaircraft weapons of the 4th Guards Tank Army alone on 18 April 1945 shot down 22 German aircraft.

**Thus, the basic trends in the development of air defense of the mobile groups of the armies and fronts were:** an increase in the personnel and weapons for the antiaircraft cover and, as a consequence, a greater degree of their massing; a desire to organize all-altitude air defense for the troops based on the comprehensive use of the antiaircraft machine guns, the small- and medium-caliber antiaircraft artillery and the fighter aviation; the increased maneuverability of the ZA and its ability to conduct extended and intense combat operations in covering the mobile groups independently and in cooperation with the IA; increased combat readiness of the air defense personnel and weapons to repel surprise enemy air strikes under all situational conditions; improved cooperation between the ZA, IA and covered troops; the development of air defense from a type of support into one of the active forms of combat operations by the mobile group troops.

The need became apparent for the following: having autonomous, effective antiaircraft mounts with armor possessing high mobility, cross-country capability and capable of conducting combat operations under difficult weather conditions and at night for covering the mobile groups, particularly the tank formations; organizing a system of reconnaissance for the air enemy, using mobile radars in the course of the operation; having in the organic air defense units (formations) of a tank army mobile control points for centralized control of the air defense personnel and weapons in repelling enemy air raids.

The experience acquired in organizing and conducting air defense for the mobile groups of the fronts during the Great Patriotic War underlay the technical, organizational and operational-tactical improvement of organic air defense and was also taken into account in working out the manuals and regulations on air defense for the Ground Forces.

#### FOOTNOTES

- <sup>1</sup> TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 36, inv. 12552, file 34, sheets 13-29.
- <sup>2</sup> "Sbornik materialov po izucheniyu opyta voyny" [Collection of Materials on Studying the Experience of the War], No 6, Voenizdat, 1943, p 92.
- <sup>3</sup> TsAMO, folio 36, inv. 12552, file 83, sheet 21; file 70, sheet 44; file 88, sheet 35.
- <sup>4</sup> Ibid., folio 36, inv. 12552, file 91, sheet 28.
- <sup>5</sup> Ibid., file 90, sheets 99, 100.
- <sup>6</sup> Ibid., folio 302, inv. 20671, file 23, sheets 80-81.

<sup>7</sup> Ibid., folio 36, inv. 12552, file 102, sheet 183.

<sup>8</sup> In the summer of 1944, the staff of the field headquarters of a tank army still did not have an army air defense artillery deputy commander or an air defense section (in contrast to a combined-arms army).

<sup>9</sup> TsAMO, folio 36, inv. 12552, file 177, sheets 69-71.

<sup>10</sup> Ibid., file 177, sheet 3.

<sup>11</sup> [Not in text.]

<sup>12</sup> [Not in text.]

<sup>13</sup> TsAMO, folio 36, inv. 12552, file 209, sheets 87-88.

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## 1st POLISH INFANTRY DIVISION IN BATTLE FOR LENINO DISCUSSED

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 4, Apr 83 (signed to press 1 Apr 83) pp 28-33

[Article by Candidate of Historical Sciences, Docent, Col Yu. Sukhinin: "On the Question of the Organization and Conduct of Combat by the 1st Polish Infantry Division at Lenino"]

[Text] On 12 October 1943, near the village of Lenino in Mogilev Oblast, the 1st Polish T. Kosciusko Infantry Division engaged the Nazi troops in battle. This was the battle which marked the beginning to Polish-Soviet fraternity and to the combat association strengthened by the blood shed by the Polish and Soviet soldiers.

After the completion of the Smolensk Offensive Operation on 2 October 1943, the troops of the Kalinin and Western Fronts were confronted with the conducting of particular operations in the Vitebsk, Orsha and Mogilev sectors in the aim of tying down the basic forces of the Army Group Center and to prevent the regrouping of its forces to the southern strategic sector, where the main task of the campaign was being carried out.

On the basis of the overall plan for the forthcoming operation by the Western Front<sup>1</sup> and the received mission, the commander of the 33d Army, Col Gen V. N. Gordov made his decision for the offensive. The field force was to make the main thrust on the axis of Polzukhi, S. Dyatel and Shklov (see the diagram), break through the enemy defenses in the sector of Ponizovye and Lenino (the width of the breakthrough sector was 5 km), to defeat the units of the enemy 337th Infantry Division and capture the line along the western bank of the Pnevka River. Then, in widening the zone of advance, there were plans to commit the mobile army group to the engagement (the V Mechanized Corps and the VI Guards Cavalry Corps) and, in increasing the strength of the attack, to come out on the Dnepr River. The 42d and 290th Rifle Divisions and the 1st Polish Infantry Division were to advance in the first echelon. The army's remaining formations, the LXV and LXX Rifle Corps and two divisions under the army (the 164th and 222d Rifle Divisions) were to carry out a regrouping and be ready to develop the offensive.<sup>2</sup>

The 1st Polish Infantry Division (commander, Brigade Gen Ziegmund Berling) was to break through the enemy defenses in the sector of Sysoyevo and marker 215.5, in cooperation with the adjacent formations to rout a portion of the forces of the 1st and 2d Infantry Battalions from the 688th Infantry Regiment in the region of Polzukhi, Trigubovo, and capture a line along the Pnevka River. In covering the flanks of the 1st Polish Infantry Division, to the right of it advanced the 42d Rifle Division (commander, Maj Gen N. N. Mul'tan) and to the left the 290th Rifle Division (commander, Col I. G. Gasparyan).





The terrain on which combat operations were planned for the 1st Polish Infantry Division and its adjacent formations was difficult in the entire zone of the army, for all the branches of troops and primarily the tanks. The Mereya River was a particularly serious obstacle. Although it was not more than 5-6 m wide, the silty bottom and particularly the swampy floodplain created additional complications. Moreover, the western bank of the Mereya was significantly higher than the eastern and this made it easier for the enemy to observe the actions of the Soviet and Polish troops. Some 5-6 km away from the forward edge (in the zones of advance of the 290th sd [rifle division] and the 1st ppd [Polish infantry division]) there was a forested area as well as ravines. This provided an opportunity for the enemy to regroup the personnel and weapons in concealment while for the advancing troops this complicated observation and orientation in the field during the course of combat operations.

The exposed terrain on the eastern bank of the Mereya impeded the protecting of the troops against Nazi ground and air reconnaissance while the existing elevations (217.6 in the zone of the 42d sd, 215.5 in the zone of the 1st ppd and 224.5 in the zone of the 290th sd) made it possible to conduct visual observation of the enemy for not more than 400-500 m. In the zone of advance, the road network was little developed.

Ahead of the army's front of advance in the first and second enemy positions up to four infantry battalions were on the defensive and these had more than 100 artillery pieces, including around 20 antitank ones. Directly in the zones of advance of the army first echelon formations, the army had personnel and weapons indicated in Table 1.

Table 1\*

The Enemy in the Zones of Advance of the First Echelon Formations of the 33d Army

Divisions	Enemy Personnel and Weapons	
	In First Position	In Second Position
42d sd	To 2 pr [infantry company] of 1 [battalion]/688 pp [infantry regiment], 44 guns and mortars	To 2 reinforced infantry battalions of 337th Infantry Division, 17 tanks and "Ferdinand" self-propelled guns defending in zones of advance of 42d and 290th sd
1st ppd	To 2 pr on boundary of 1st and 2d/688 pp, 35 guns and mortars	
290th sd	To 2 pr 2/688 pp, 25 guns and mortars	

\* Compiled from data of TsAMO [Central Archives of Ministry of Defense], folio 338, inv. 8712, file 372, sheets 3, 7, 41.

An analysis of the table's data indicates that in breaking through the enemy's first position, each division would have to rout up to two infantry companies and neutralize artillery weapons the density of which per kilometer of front was: 30 units in the zone of the 42d sd, 17 for the 1st ppd and 12 for the 290th sd. In addition, in crossing the second position, the first echelon formations would have to overrun two reinforced infantry battalions. Here the main role was to be played by the 42d and 290th Rifle Divisions as the basic portion of these units was defending in their zones of advance.

**By the start of the offensive, the 1st Polish Infantry Division included** three infantry regiments, an artillery regiment and a tank regiment, a separate antitank battalion as well as individual units and subunits under the division. The number of personnel in the formation was 12,144 men. Each infantry regiment numbered over 2,700 soldiers and officers. The units (subunits) were rather fully supplied with weapons and combat equipment. As a whole, as was pointed out by the division's chief of staff, Col N. Lagodzinskiy, in his report, on 10 October the formation had around 10,000 rifles and submachine guns, up to 250 guns and mortars and 39 tanks.<sup>4</sup>

At the same time, the other rifle formations of the 33d Army had a significant shortage of personnel, weapons and combat equipment. Thus, the 42d Rifle Division numbered just 4,646 men,<sup>5</sup> and the 290th had 4,435 men,<sup>6</sup> that is, less than 50 percent of the established number.<sup>7</sup> In terms of guns and mortars, the units of the 42d sd had, correspondingly, 60 and 70 percent of the full number. The situation with artillery was analogous in the 290th sd.

However, regardless that the 1st ppd had almost 3-fold more personnel and more weapons and equipment than the Soviet divisions, it was assigned a breakthrough area of just 2 km along the front. The 42d and 290th Rifle Division received breakthrough areas of 1.5 km each.

In the aim of dependable fire damage to the enemy, the staff of the 33d Army worked out a plan for an artillery offensive. On the basis of it **each division was assigned three artillery (mortar) regiments while army (howitzer, mortar) brigades were the means of support.**<sup>8</sup>

Proceeding from the presence of the TOE and assigned artillery divisions as well as the army artillery group,<sup>9</sup> the 42d and 290th Rifle Divisions had, respectively, 316 and 434 guns and mortars while the 1st ppd had 460.<sup>10</sup> Consequently, in preparing for the offensive operation, the command of the 33d Army evenly allocated the weapons available to it among the first echelon formations and this put both the Polish and Soviet divisions virtually under equal conditions for carrying out the advance.

By the start of the operation, the following balance of forces existed (Table 2).

The advancing rifle divisions had a more than 4-fold superiority over the enemy in personnel while the Polish division had a 5-fold one. They surpassed the enemy in artillery by 7.2-17-fold.

The offensive by the formations of the 33d Army at Lenino, and particularly the battle of the 1st ppd on 12-13 October 1943, have been repeatedly taken up in a number of historical works.<sup>11</sup> The given article examines only certain particular features of combat operations.

The most characteristic feature inherent to the fierce battles at Lenino was the combating of the counterattacking enemy. It made a majority of the counterattacks basically against the flanks of the assault grouping of the 33d Army and this made it significantly easier for the 1st Infantry Division which was fighting in the center of the army's operational configuration to carry out its tasks. Already at 1400 hours on 12 October, in endeavoring to prevent the widening of the breakthrough in the first position toward the flanks, two enemy infantry companies supported by the "Ferdinand" self-propelled guns counterattacked the subunits on the right flank of the 290th Rifle Division from the region to the southwest of Trigubovo. On 13 October, units of the 42d Rifle Division for a

Table 2\*

## Balance of Personnel and Weapons on 12 October 1943

Divisions	Personnel and Weapons	Troops		Ratio
		Friendly	Foe	
42d sd	sb [rifle battalion] (pb [infantry battalion])	6.3	1.5	4.2:1
	guns, mortars	316	44	7.2:1
	tanks	--	4	0:4
1st ppd	pb	8.1	1.5	5.4:1
	guns, mortars	460	35	13.1:1
	tanks	39	6	6.5:1
290th sd	sb (pb)	6.3	1.5	4.2:1
	guns, mortars	434	25	17:1
	tanks	--	7	0:7

\* For the Soviet and Polish troops, the table gives conditional battalions. Considering the undermanning of the Soviet units, a coefficient of 0.7 has been used (in a division  $9 \times 0.7 = 6.3$  sb). The Polish infantry battalion was insignificantly less in personnel than a German battalion. In this regard only a coefficient of 0.9 was employed (in the ppd  $9 \times 0.9 = 8.1$  pb).

period of 24 hours drove off counterattacks by the 261st Infantry Regiment of the 113th Infantry Division which had been moved up into the army's zone.<sup>12</sup>

In the course of the heavy bloody battles, the Soviet and Polish troops suffered significant losses. The names of 500<sup>13</sup> Polish soldiers and over 1,700 Soviet soldiers who died on the battlefield at Lenino have been entered in perpetuity in gold letters in the commemorative book at the Museum of Soviet-Polish Combat Alliance.<sup>14</sup> The Soviet Command, realizing that the losses of the 1st Polish Infantry Division in an extended and debilitating engagement could increase significantly, during the night of 14 October withdrew its units from battle. The Soviet 164th Rifle Division was moved into the place of the Polish division. This fact also shows the fraternal and benevolent attitude of the Soviet leadership toward the Polish friends in arms.

As is known, on 15 October the Nazi Command moved up units from the 252d Infantry Division into the sector of operations of the 33d Army and these reinforced the defending 337th and 113th Divisions. Upon the orders of the commander of the Western Front, on 18 October 1943, the 33d Army along with the other field forces went over to the defensive. The partial offensive operation in the region of Lenino ended with this.

As a whole, the designated offensive operation by the 33d Army did not bring tangible results. However, in conducting active combat operations, the army's troops tied down

almost three enemy divisions which could have been used by the enemy command for eliminating the 23 bridgeheads on the Dnepr which had been captured by that time by the Soviet troops. Herein lay the definite contribution by the personnel of the 1st Polish Infantry Division.

### From the Editors

The editors and the editorial board of the journal have turned to a participant in the battles against the Nazi invaders as a member of the 1st Army of the Polish troops, Col Gen Engr Trps Yu. V. Bordzilowsky, with a request to share his impressions on the relationships between the Soviet and Polish brothers in arms during the war. Here is what he said.

I consider it my duty to emphasize the exceptionally attentive, friendly and, even more, fraternal attitude of the Soviet government and the Soviet military command to the questions of the organization and combat employment of formations from the Polish Army during the war.

The Polish field forces, formations and units, as a rule, received more TOE tank, artillery and engineer units in comparison with the corresponding Soviet military formations. In particular, the 1st T. Kosciusko Polish Infantry Division, the first formation of the Polish Army (it began to be organized in May 1943) had a tank regiment and almost 3-fold more personnel than its adjacent units, the 42d and 290 Rifle Divisions.

The Soviet command sent to the Polish field forces and formations its own officers (including 150 men for the 1st ppd), chiefly of Polish nationality. The Soviet generals and officers brought with them the combat experience of several years of war and this to a significant degree compensated for the lack of such in the newly organized and untested Polish units.

The Soviet command showed a very considerate attitude toward the combat employment of the Polish formations and, as a rule, put them in a more advantageous position. For example, at Lenino the first Polish Infantry Division was in the center of the assault grouping. Its flanks were covered on the right by the 42d sd and on the left by the 290th sd and these were exposed to enemy flank counterattacks. Moreover, the Polish division was aimed at a vulnerable point in the enemy defenses, at the boundary area of defending battalions. After 2 days of battle, it was removed into the rear.

All of this causes great surprise by a statement over the Polish Radio by a certain W. Sokorsky who, contrary to historical truth, has asserted that supposedly one of the most difficult areas of the front was intentionally chosen for the 1st Polish Infantry Division in the battles at Lenino, it was not given a sufficient amount of reinforcements while the offensive by the division's units was poorly supported by the fire of supporting artillery.

### FOOTNOTES

- <sup>1</sup> The 10th Guards, the 21st and 33d Armies were advancing in the first echelon of the Western Front.
- <sup>2</sup> Prior to the start of the operation, the LXV sk [rifle corps] (149th, 173d and 58th sd), the LXX sk (371st, 338th sd), the 164th and 222d sd were in the zone of the adjacent 49th Army.

- <sup>3</sup> TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 338, inv. 8712, file 344, sheet 41.
- <sup>4</sup> Ibid., file 349, sheet 7.
- <sup>5</sup> Ibid., file 330, sheet 55.
- <sup>6</sup> Ibid., file 334, sheet 31.
- <sup>7</sup> The strength in the sd according to the December 1942 TOE was: 9,435 men in terms of personnel, 92 guns and 109 mortars.--Editors.
- <sup>8</sup> The reinforcements of the divisions were: the 42d sd had assigned to it: artillery regiments from the 222d and 58th sd, the 1309th Antitank Artillery Regiment and was supported by the 27th Mortar Brigade; the 1st ppd had attached to it: artillery regiments from the 173d and 149th sd, the 538th Mortar Regiment and was supported by the 67th Howitzer Brigade; the 290th sd had attached to it: artillery regiments from the 338th, 371st and 173d sd and was supported by the 71st Light Artillery Brigade (TsAMO, folio 338, inv. 8712, file 372, sheet 16).
- <sup>9</sup> The composition of the army artillery group included the 5th Artillery Division, the 17th Artillery Brigade, the 95th Heavy Howitzer Brigade, the 18th and 119th Heavy Artillery Brigades and the 761st and 518th Artillery Regiments (TsAMO, folio 338, inv. 8712, file 372, sheets 16, 17).
- <sup>10</sup> TsAMO, folio 338, inv. 8712, file 372, sheet 10.
- <sup>11</sup> Among the books showing the particular features of the combat operations of the 1st Polish Infantry Division are: V. A. Radzivanovich, "Voyennyye memutary. Pod pol'skim flagom" [Military Memoirs. Under the Polish Flag], Voenizdat, 1959; a collection of articles by Polish authors: "Boyevyye deystviya narodnogo Voyska Pol'skogo" [Combat Operations of the Polish People's Army], Voenizdat, 1961; the memoirs of the participants of the battles at Lenino generalized in the book: Henrich Hubert, "Borom, lesom..." [By the Grove, By the Forest...], Voenizdat, 1962 and so forth.
- <sup>12</sup> TsAMO, folio 338, inv. 8712, file 456, sheet 28.
- <sup>13</sup> The archival documents give 502 persons as killed (TsAMO, folio 338, inv. 8712, file 325, sheet 15).
- <sup>14</sup> "Sovetskaya Voyennaya Entsiklopediya" [Soviet Military Encyclopedia], Vol 4, Voenizdat, 1977, p 619 and data from the Museum of the Soviet-Polish Combat Alliance opened in the village of Lenino.

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## COMMENTARY ON DEFENSE AGAINST CRUISE MISSILES IN WORLD WAR II AND POSTWAR PERIOD

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 4, Apr 83 (signed to press 1 Apr 83) pp 59-66

[Article by Candidate of Historical Sciences, Col A. Orlov: "The Development of the Means and Methods for Combating Cruise Missiles During the Years of World War II and in the Postwar Period"]

[Text] In the new round of the arms race initiated by the U.S. imperialists and their NATO allies, the chief emphasis has been put on attaining military superiority in strategic weapons over the Soviet Union and the Warsaw Pact as a whole. One of the basic areas here has been the program for the mass production of cruise missiles involving all types of launching including ground, sea and air. In the estimate of American military specialists, cruise missiles possess significant combat capabilities. Here it is essential to bear in mind that this is a weapon not of defense, but rather of attack. With good reason the current U.S. Secretary of the Air Force called the decision to deploy the cruise missiles "a significant turning point in the history of strategic deterrence...."<sup>1</sup>

In actuality, history shows that this is not the first time that the imperialists have endeavored to employ this type of missile weapon. During the years of World War II, Nazi Germany for the first time employed cruise missiles (flying bombs) known as the V-1, the distant predecessors of today's cruise missiles, for massed strikes against the cities of England and later Belgium. The combating of these presented serious difficulties for air defense and had its specific features. In the postwar period, the cruise missiles developed by the United States and other NATO nations have been used in local wars initiated by imperialism.

During the years of World War II, the period of the combat employment of the German V-1 cruise missiles continued from June 1944 through March 1945. Over the 10 months, in the aim of hitting objectives in England, around 10,500 V-1 were launched and around 8,700 against Belgian objectives.<sup>2</sup> The launch was made from stationary ground launching positions prepared ahead of time on French territory and later in the Netherlands (in March 1945) as well as from carrier aircraft.

Even the first rocket attacks against London showed that the cruise missiles represented difficult targets for air defense. The Wehrmacht Command was able to achieve tactical surprise and during the first weeks comparatively high massing of the V-1 strikes. During the first month of the rocket strikes, every 24 hours up to 100-140 V-1 entered English air

space. More than one-half of these, and during the first raids even up to 80 percent,<sup>3</sup> reached London. Moreover, in contrast to manned aircraft avoid air combat with superior enemy forces or not enter the zone of the installation fully covered by air defense weapons, the V-1 followed a set program and when they were shot down over the installation, they exploded, causing extensive damage. As a rule, a raid started with a 40-50-minute massed strike, and then followed volley launches over uneven intervals of time (60-75 minutes) lasting 10-14 hours. Also employed was methodical firing by individual V-1 (for 22-24 hours) alternating with volley launches.

The success of the raids was also aided by the tactics of employing the cruise missiles. The Nazis launched the V-1 wherever possible simultaneously from all operating launching positions (there were 55-65 of them) over uneven time intervals and at low altitudes (300-1,000 m) in order to create a high density and put the enemy under difficult conditions. They also skillfully used the weather, launching a maximum number of cruise missiles under bad weather conditions, when the operations of fighter aviation were restricted.

The cruise missiles were actively combated by four methods:

- 1) By destroying the V-1 in the air;
- 2) By destroying the HE-111 carrier aircraft;
- 3) By making air raids against ground targets involved in the production and combat employment of the missiles;
- 4) By capturing the bases of the rocket units by Allied ground forces.

The English Air Defense Troops played the basic role in countering the cruise missiles. As experience showed, the configuration of the air defense system envisaged in the initial plan for repelling the V-1 strikes did not provide a dependable cover for the defended objectives. This was explained by the insufficient number of air defense weapons assigned to combat the cruise missiles as well as by the operational configuration of the air defense system which impeded the efficient use of fighter aviation and antiaircraft artillery.

The air defense system set up to counter the cruise missiles consisted of three zones:

- 1) Fighter aviation (over the channel and English coast);
- 2) Antiaircraft artillery (over the distant approaches to London);
- 3) Barrage balloons (over the near approaches to London).

The basic shortcoming for such a configuration of the air defense system was that the operating zone of the fighter aviation overlapped the operating zone of the antiaircraft artillery and coordination between these two branches of troops was unsatisfactorily organized. The fighters, in pursuing a target, often entered the zone of the antiaircraft weapons and risked being shot down by their own artillery. This did not make it possible for both branches of troops to make full use of their combat capabilities (the antiaircraft gunners shot down just 9 percent of the V-1).<sup>4</sup> The low-altitude flight impeded the prompt detection of the missiles by the air defense radars and consequently reduced the



time that air defense weapons could be actively employed against them. This was of very substantial significance, since the maximum warning time before the target approached the coast was just 6 minutes and its time of flight from the coast to the English anti-aircraft artillery zone was 5 minutes. At altitudes of 300-600 m, a cruise missile represented a difficult target for the anti-aircraft artillery, since the high speed and low altitude of flight caused significant angular displacement and this impeded the aiming of all-caliber weapons.

It was also difficult for the fighter aviation to combat the cruise missiles. By the start of the massed V-1 raids, only the Tempest and Spitfire-XIV fighters had a speed on the order of 700-730 km per hour making it possible to operate successfully against the V-1, but just four squadrons flew these planes. The remaining fighters (the Spitfire-IX, Typhoon and Mosquito) had speeds approximately equal to the V-1 (600 km per hour). For this reason the Mustang-III fighters (speed 725 km per hour) were turned over from the Air Force to air defense. Moreover, the armor was removed from the other types of fighters used against the V-1, the power of the engines was increased, the paint was removed and the sheathing polished. This succeeded in increasing their speed by 50 km per hour.<sup>5</sup>

The intercepting of a flying cruise missile depended upon the obtaining of accurate and prompt information about the target (particularly for the fighters which had only a small advantage in speed over the V-1). Two methods of fighter guidance were employed. For intercepting the V-1 over the sea, the fighters were guided by data from radar stations (detection range up to 80 km) located on the coast. The advantage of this method was that the missile shot down over the sea did not cause any harm. In operations over land, information on the location and flight parameters of the rockets (coordinates and heading of the target) was continuously transmitted to all fighters the receivers of which were tuned to a single frequency. The drawback of the designated method was several fighters could follow the same target. This created an unnecessary expenditure of forces and impeded an effective allocating of efforts by the fighter aviation.

Since a majority of the various fighters did not possess superiority in speed, closing in and attack on the target from the rear, as a rule, did not prove effective. A better method of attack under these conditions was the following of the rocket on a parallel course somewhat ahead of it with a subsequent turning toward the target and the destruction of it by machine gun and cannon fire.<sup>6</sup> The interception was made by fighter aviation basically from a status of "air patrol." The fighter could not come closer to the target than 100 m when firing as otherwise the exploding of the V-1 would destroy the aircraft itself. Sometimes the fighters, in closing in, tipped it over by the air stream produced by the aircraft or by tipping the wing of the V-1 forced it to alter course or go into a dive prematurely.

Measures were also taken to increase the effectiveness of anti-aircraft artillery fire. Mobile anti-aircraft guns with manual transversing and elevating gear were replaced by stationary ones equipped with electric drives and automatic fuze setters making it possible to fire at a higher rate and with increased accuracy. However, the major drawback of the stationary weapons was their immobility. For this reason, moveable platforms of steel plates began to be employed in the place of concrete pads.<sup>7</sup>

The first V-1 raids showed that the positioning of the batteries of light anti-aircraft weapons together with the positions of the anti-aircraft searchlights was ineffective. Then the small-caliber batteries were moved forward and established ahead of the line of the heavy

antiaircraft artillery and communication was established between the small-caliber batteries and the AAFCE and gunlaying radar of the heavy antiaircraft artillery. This made it possible to employ the light weapons for firing at invisible targets and increase the results of their fire.<sup>8</sup> Of great importance for increasing the effectiveness of antiaircraft artillery fire was the delivery of 165 American SCR-584 gunlaying radars which began arriving in England at the end of June 1944.<sup>9</sup>

In July 1944, the command of the English air defenses was able in a short period of time to reorganize the nation's air defense system and create a large grouping of personnel and weapons which ensured the more successful combating of the cruise missiles. The zone of the antiaircraft artillery was moved to the coast. In front of it (over the Channel) and behind it two fighter aviation zones (inner and outer) were established. The countering of the V-1 started 30-50 km from their launching positions, the depth of air defense was 100-150 km and the time of action against the targets was 15 minutes and more. Success was achieved by involving a significant amount of combat equipment which in its tactical and technical performance was capable of effectively countering the V-1 (the Vampire and Meteor jet fighters which were received), by the massing of personnel and weapons in the main sector of cruise missile operations, by the maneuvering of the forces depending upon the tasks to be carried out and by organizing closer cooperation between the branches of air defense troops. The negative aspect of the new configuration of the air defense system was the splitting of the single fighter aviation zone into two, however this was compensated for by the more effective employment of antiaircraft artillery. Thus, the gunlaying radars could track the targets more confidently, since there was no interference from local features over the sea. An opportunity arose to equip the antiaircraft shells with radar fuzes and this sharply increased the firing results of the antiaircraft weapons.<sup>10</sup> By September 1944, the air defense weapons were already shooting down up to 60 percent of the V-1 and by March 1945, over 70 percent.<sup>11</sup>

After the Allied troops had captured the ground launching positions of the V-1 in France, the cruise missiles were launched (in September 1944--January 1945) from HE-111 carrier aircraft. This was explained primarily by the loss of all the ground launching positions for the rockets. Moreover, the launching of the V-1 from aircraft made it possible to make attacks from different directions. Subunits of carrier aircraft made raids in groups of 15-20 aircraft, as a rule, from the northeast in skirting the main grouping of the English air defense system. In traveling to the rocket launching line at night and at low altitude, they usually were not picked up by the English radars. At a distance of 95-100 km from the English coast, having climbed to an altitude on the order of several thousand meters, the HE-111 launched the cruise missiles at a distance of 50-65 km from the English coast and returned to their airfields at low altitudes.<sup>12</sup>

The countering of the V-1 carrier aircraft was the greatest difficulty. The detection and fighter guidance radars "did not see" the targets traveling at a low altitude above the sea.

Also more difficult than in the summer of 1944 was the combating of the cruise missiles themselves which traveled toward their objectives in darkness at altitudes of 600-300 m, making their detection difficult.

For the fighters the basic problem was that under nighttime conditions, regardless of the bright jet of the V-1, it was difficult to determine the range to the target. The experience and skill of the pilots were the crucial factor in success. A deep searchlight-illuminated zone was organized in the aim of increasing the effectiveness of fighter operations.

Regardless of the difficulties which the English air defense encountered in combating the aircraft-launched V-1, it repelled the strikes by the cruise missiles more successfully than in the summer when they had operated from ground positions. This was explained by the acquiring of experience, by the receiving of more advanced combat equipment, by the reduced degree of massing (9-12 V-1 in each raid) as well as by the miscalculations of the enemy which was unable to fully utilize the absence of an English all-round air defense system for making raids from undefended directions. The difficulty of launching the V-1 from carrier aircraft and the low effectiveness of their strikes led to the halting of the employment of cruise missiles from aircraft.

Starting in August 1943, the German ground installations involved in the basing and production of the V-1 were subjected to Allied air strikes. By April 1945, in the aim of hitting these installations, around 69,000 aircraft sorties were made and 122,000 tons of bombs were dropped.<sup>13</sup> Here the Allied losses were 450 aircraft and 2,900 pilots.<sup>14</sup>

However, regardless of the significant efforts by Allied bomber aviation, it did not succeed in causing substantial harm to the enemy rocket units or the industrial enterprises producing rocket weapons.<sup>15</sup> This was explained by the fact that the raids against the installations involved in the production and employment of the rockets were made irregularly by the aviation, ordinarily at the same time as carrying out missions to support the operations of the ground troops. Important rocket-building installations (the power plant of the rocket-assembly plant in Nordhausen and the enterprises producing navigation equipment for the V-1) the destruction of which would have paralyzed rocket production were not subjected to bombings.

An analysis of the combating of the cruise missiles of Nazi Germany by the English Armed Forces shows that regardless of a number of major miscalculations and errors, with the aid of the U.S. Armed Forces, this was carried out with increasing success. As a total, of the 7,488 V-1 detected by the English air defense weapons, 3,957 were shot down (53 percent), 47 HE-111 carrier aircraft were destroyed (around 50 percent), including 41 in the air, and 35 of the 80 launch positions were put out of commission (over 40 percent).<sup>17</sup>

More than 2,000 V-1 were destroyed immediately after launching or in flight, and the remainder were not detected by air defenses and exploded (fell) on English territory.

Here it is essential to point out that the air force and air defense did not become the crucial factor in combating the enemy rocket weapons. Only the capturing of the bases of the rocket units by the ground forces combined with the rapid offensive by the Soviet Army deep into Germany which paralyzed the production of the Third Reich led to the halting of the rocket strikes. The expenditures by the Allies on combating the cruise missiles exceeded by 4-fold the expenditures by Germany on the development, production and employment of the V-1.

The basic importance of the experience of the combat employment of cruise missiles during the years of World War II was that even then many basic traits and trends were already apparent and which have undergone further development in the postwar period.

As has been pointed out by foreign specialists, cruise missiles with their surprise and massed employment, have been an effective and economic means of air attack. Their launching from aircraft disclosed the great possibilities for this method of the combat employment of rockets. Subsequently, this has undergone extensive development.

Immediately upon the end of World War II, the United States, having become the leader of the capitalist world, initiated an unrestrained arms race and set out on the path of preparing for war against the USSR. Here the main bet was made on atomic weapons a monopoly of which caused the U.S. leadership to search for ways to create promising carriers. The plans envisaged the creation of nuclear forces consisting of strategic bombers, intercontinental and operational-tactical missiles, including cruise missiles.

The operational-tactical cruise missiles of the 1950's such as the Matador and Regulus used by the U.S. Air Force and Navy had a range of several hundred kilometers and substantially complemented the strategic air strikes while the Snark intercontinental missile (a range of up to 10,000 km) could directly operate from U.S. territory against the USSR. Even in the exercises of the U.S. and NATO armed forces in 1953-1956 (Carte Blanche, Whipsaw, Tempo, Dividend, Corona and others), the methods of the combat employment of cruise missiles were thoroughly worked out.

For overcoming air defense systems, the United States and the other NATO countries worked intensely on improving the cruise missiles (a shifting to low altitudes, increased speed and range and increased target hitting accuracy).

However, in the 1960's, the NATO military specialists concluded that the air defense combat equipment had outstripped the development of the air attack weapons of those times. By the middle of the 1960's, the air defense systems were already armed with anti-aircraft missile complexes and supersonic fighter aviation capable of dependably carrying out the tasks of destroying in the air cruise missiles operating at high and low altitudes and successfully combating the carrier aircraft and air-to-ground cruise missiles on which emphasis had been put in developing the air forces of the United States and the other NATO countries. The achievements in the area of developing air defense weapons were clearly apparent in the course of the war by the American aggressors against Vietnam.

With the appearance of jet aviation and anti-aircraft guided missiles in the Vietnamese air defenses, the losses of American aircraft, including the carriers of the Bullpup and Shrike guided cruise missiles, increased.<sup>18</sup>

The anti-aircraft missile troops of the Vietnamese People's Army in close cooperation with the anti-aircraft artillery and fighters, dependably covered the most important installations of the nation. "The defensive perimeters consisting of surface-to-air missiles and conventional anti-aircraft weapons around the cities of Hanoi and Haiphong were stronger than we assumed," wrote the American journal AVIATION WEEK at the beginning of 1968.<sup>19</sup>

The effectiveness of the Vietnamese air defense system was increased by the most efficient positioning of the personnel and weapons ensuring maximum utilization of the combat capabilities of each type of weapon, to organizing firm control and close cooperation among the branches of troops and to the increased skill of the combat teams and crews.

The experience of the Vietnamese War forced the Pentagon to seek out ways for improving the air attack weapons, including cruise missiles. By this time, the technical conditions had matured for this. At the end of the 1960's, small-sized gas turbine engines had been developed and these provided a low specific fuel consumption with low weights and volumes and high-energy hydrocarbon fuels had appeared. The advances made in the area of microelectronics and computers made it possible to develop fundamentally new guidance systems. On this basis, in the 1970's, the United States developed and tested new

ground-, sea- and air-launched cruise missiles (GLCM, SLCM, ALCM). Western military specialists feel that these possess very great opportunities for crossing modern air defenses and are capable of operating at a range up to 2,600 km and flying at altitudes of 150-60 and even 30-15 m at a speed of 850-900 km per hour. They have various high-precision guidance systems, they possess good resistance to interference and have a small effective reflecting surface, and can be launched from already existing aircraft, submarines and ground launchers (for example, from the launcher of a Lance missile).<sup>20</sup>

Military specialists from the Pentagon feel that the new cruise missiles are very difficult targets for air defense and that they should be used on a massed basis and in the aim of misleading the enemy air defense system several missiles should be launched against each object from different directions.<sup>21</sup>

At the same time, in the opinion of foreign specialists, modern cruise missiles have a number of inherent shortcomings which facilitate their combating. For example, the desire to increase their range has necessitated the installing of additional tanks (suspended or built in), but this increases the effective reflecting surface of the cruise missiles and facilitates their detection. Once detected, the missiles become vulnerable for the air defense weapons as they do not have the possibility of countering the measures employed against them.

In the testing of cruise missiles to overcome air defenses in the United States, it was established that a number of modern anti-aircraft missile complexes (such as the Patriot, Advanced Hawk, Chaparral and others) and target detection systems<sup>22</sup> can be successfully employed against them. According to data in the foreign press, the use of radars with antennas located on masts several-score meters tall makes it possible to increase the possibility of detecting and attracting cruise missiles operating at maximum low altitudes and against the background of interference from local objects. The intercepting of cruise missiles flying at subsonic speed can be achieved by anti-aircraft missile complexes, particularly the multibarrel ones with continuous sending and the use of radars with high-altitude antennas. The subsonic cruise missiles can be destroyed by anti-aircraft missile complexes with semiactive homing heads. The troop short-range anti-aircraft missile complexes (for example, the Chaparral and analogous models) can be successfully employed against cruise missiles at low altitudes and in this instance the SAM is guided to the target using optical devices. Anti-aircraft artillery is also an effective means of countering cruise missiles, particularly of the 10-40-mm calibers, for example the artillery system of the U.S. Navy Vulcan-Phalanx (a 20-mm 6-barrel system with a rate of fire of 3,00 rounds a minute).

As has been pointed out in the foreign military press, for countering cruise missiles, it is also possible to employ active and passive electronic countermeasures. Thus, during the Anglo-Argentine conflict in 1982, two Exocet cruise missiles were launched from an Argentine Super Etendard aircraft against the English antimissile destroyer "Sheffield." One of them hit the destroyer, but the other was diverted to a dummy target in the form of curtains of dipole reflectors<sup>23</sup> set up by the English frigate "Plymouth." Devices equipped with high explosive charges with autonomous detonation sensors can be set up in the most probable directions of overflight by low-altitude cruise missiles. When the cruise missile flies over the device, it is activated and the missile is blown up. The setting up of smoke-screens at altitudes of 30-100 m impedes the operation of those cruise missile guidance systems where optical, infrared and microwave devices are employed.

Thus, the adopting of new cruise missiles, their increased combat capabilities and broadened methods of use have led to a further improvement in the air defense weapons and systems. Over the long run, in the opinion of foreign specialists, cruise missiles can be effectively countered by automated combined air defense systems which bring together anti-aircraft guided missiles, antiaircraft artillery, jam-proof radars for detecting low-flying targets as well as equipment for electronic and optical reconnaissance and the setting of jamming.

#### FOOTNOTES

- <sup>1</sup> PRAVDA, 7 January 1982.
- <sup>2</sup> R. A. Young, "The Flying Bomb," London, 1978, p 129; "Report by Air Chief Marshal R. Hill to the Secretary of State for Air," 17 April 1948, p 5601.
- <sup>3</sup> D. Richards and H. Saunders, "Voyenno-vozdushnyye sily Velikobritanii vo vtoroy mirovoy voyne 1939-1945" [The British Air Force in World War II of 1939-1945], Voenizdat, 1943, pp 543, 545.
- <sup>4</sup> F. Pile, "Ack-Ack. Britain's Defense Against Air Attack During the Second World War," London, 1956, p 293.
- <sup>5</sup> N. Macmillan, "Royal Air Force in the World War," Vol IV, London, 1950, p 184.
- <sup>6</sup> N. Macmillan, op. cit., p 186.
- <sup>7</sup> F. Pile, op. cit., p 292.
- <sup>8</sup> Ibid.
- <sup>9</sup> "Parliamentary Debates. House of Commons," Vol 401, Col. 1323.
- <sup>10</sup> Previously a radar fuze could not be widely employed since due to a design problem in its self-destruction device, the use of this fuze over densely populated areas where the basic forces of the antiaircraft artillery were positioned, created a danger for the population. The use of the new fuze reduced the consumption of shells for hitting one V-1 from 900 to 77 and then to 40.
- <sup>11</sup> "Report by Air Chief Marshal R. Hill...," p 5603.
- <sup>12</sup> D. Richards and H. Saunders, op. cit., p 550.
- <sup>13</sup> This exceeded by 40-fold the tonnage of the V-1 warheads detonated over London in June-August 1944 (B. Collier, "The Defence of the United Kingdom," London, 1957, p 338).
- <sup>14</sup> B. Collier, op. cit., p 419.
- <sup>15</sup> The V-1 production continued to rise. While in June 1944, German industry produced 2,000 cruise missiles, in September over 3,400 of them were produced (D. Irving, "The Mare's Nest," London, 1964, p 303).

<sup>16</sup> [Not in text.]

<sup>17</sup> "Report by Air Chief Marshal R. Hill...", pp 5601-5603.

<sup>18</sup> Hai Thu, "Severnyy V'yetnam protiv VVS SShA" [North Vietnam Against the U.S. Air Force], Hanoi, 1968, p 99.

<sup>19</sup> AVIATION WEEK, 1 January 1968.

<sup>20</sup> MILITARY REVIEW, March 1977, pp 3-10.

<sup>21</sup> INTERAVIA, No 6, 1976, pp 580-583.

<sup>22</sup> INTERNATIONAL DEFENSE REVIEW, No 2, 1978, p 419.

<sup>23</sup> KRASNAYA ZVEZDA, 11 January 1983.

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## COMMENTARY ON LESSONS AND CONCLUSIONS OF FALKLANDS CONFLICT

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 4, Apr 83 (signed to press 1 Apr 83) pp 67-73

[Article by Candidate of Historical Sciences, Capt 1st Rank A. Usikov: "Certain Lessons and Conclusions from the Anglo-Argentine Military Conflict"]

[Text] Recent international events have shown that imperialism has assigned an important place in achieving its political goals to local wars and military conflicts. This is clearly seen also from the military conflict in the South Atlantic in March-June 1982 between Great Britain and Argentina. The basic reason for its occurrence was the clash of Argentine national interests with the global strategy of the imperialist powers which are members of the aggressive NATO bloc.

In terms of its scope, this conflict was the most significant military conflict at sea since the end of World War II. Great importance has been attached to an analysis of it in the foreign countries. According to a statement by the NATO Secretary General Luns, the consequences of the "Falkland War" influence the military policy of the North Atlantic bloc in the future." Its events have been carefully studied by American specialists. They feel that in the course of the military operations the English military leadership had to deal with a number of complex problems which "in many ways are similar to those which the United States would have to solve in a crisis situation over the oil reserves of the Persian Gulf."<sup>1</sup>

Many details of this "military campaign" continue to be hushed up by official British circles in order to present it to the public in a better light. However, those materials which have already appeared in print have made it possible for the foreign military specialists to extract certain lessons and draw conclusions.

**An important lesson, in their opinion, is the fact that for conducting even a "small colonial war" a significant portion of the English Armed Forces had to be involved and they even had to resort to aid from the NATO bloc members.**

Regardless of the oceanic nature of the theater of war, the limited goals and scope of the conflict, Great Britain had to create a special grouping from formations, units and sub-units of all the Armed Services.

A crucial role was assigned to the **Navy** which was entrusted with the **following missions:** a sea and air blockade of the Falkland (Malvinas) Islands, the destruction of the enemy combat ships and transports, the covering of the amphibious formation in crossing the sea,



the landing of amphibious troops, air and artillery support for the troops in landing and conducting combat operations on shore, the covering of the ocean lines of communications against enemy surface and air forces.

One of the main conditions for successfully carrying out these tasks was felt to be the ensuring of supremacy at sea as well as close cooperation among the various branches of forces. Combat operations increased gradually. As of 12 April 1982, an extensive area with a radius of 200 miles around the Falkland (Malvinas) Islands was declared to be a "war zone," and nuclear submarines would commence combat patrolling in this zone. On 28 April, the sea blockade was complemented by an air one and from 7 May the zone was extended and moved 12 miles (20 km) from the Argentine coast.

Over the 2.5 months, 50 fighting ships (almost one-half of the fleet of the regular British Navy) and 48 vessels were involved in military operations in the South Atlantic. Among the combat ships were the aircraft carriers "Hermes" and "Invincible," antimissile destroyers and frigates, helicopter landing ships and others. The interventionist rapid deployment forces were also activated, including the 38th Air Force Air Group, the 3d Commando Brigade (the 3d Marines Brigade), the 2d Paratrooper Regiment and the 5th Infantry Brigade.<sup>2</sup> In the estimate of the Deputy Chief of Staff of the French Navy, Vice Admiral F. Ausser, the quantitative and qualitative superiority of the English Fleet made it possible to achieve an 8-fold superiority and this ensured the dominance of the English in the region of the Falkland (Malvinas) Islands.<sup>3</sup> The grouping of ship forces in organizational terms was drawn up as an operational force consisting of several operational groups, including two carrier, assault-ship, search-and-attack, two groups of amphibious landing forces and maintenance groups. In terms of the number and purpose of the ships comprising the operations force, it was viewed as an operations fleet which was set up considering the specific estimate of enemy capabilities and the remoteness of the area of combat operations.<sup>4</sup>

Overall leadership over the preparations of the troop groupings and naval forces was provided by a navy commander headquartered in Northwood (near London). Direct leadership over the forces in the area of the conflict was entrusted to the commander of the First Fleet of Surface Vessels. The commander of the 3d Marines Brigade was in command of the landing forces.<sup>5</sup>

For ensuring communications between the Navy command post and the flagship "Hermes," the English Gapfiller communications satellite was put into geostationary orbit. Command and control of the forces were also provided through the American satellites and the military communications system for the East Coast of Canada made available to the British Command by the NATO allies during the time of the conflict.

The forces of the assault grouping in the course of the conflict were increased by combat-ready ships, formations and units from the NATO Joint Armed Forces, by commissioning reserve ships and requisitioning cargo and passenger ships for the needs of the armed forces.

The aid to Great Britain from the NATO bloc members was not restricted to just measures of a political and diplomatic nature, but also included purely military, military-technical and economic assistance. Thus, the United States turned over to the English leadership information on the composition and condition of the Argentine Armed Forces and supplied Great Britain with various types of weapons, ammunition, military equipment and supplies, including aircraft and helicopters, ground-launched anti-aircraft missiles, mortars, radar

stations, sonar buoys, highly efficient laser target indicators and so forth. A significant portion of this equipment was delivered by American air transports to Ascension Island. The English made wide use of the American transport vessels, tankers and tanker aircraft. The Americans delivered more than 2 million gallons of fuel for English aircraft to Ascension Island. They also made available to the operations force a floating shop which was a vessel specially equipped for repair work at sea.<sup>6</sup> The command of the English force constantly received information on all movements of the Argentine troops and fleet, weather conditions on the routes of the move and in the area of the Falklands, the presence of icebergs and other information collected by American satellites and aircraft.<sup>7</sup>

**Another lesson to which foreign researchers have pointed is that military operations in an area remote from the homeland required a new approach from the British command to the questions of all-round combat and special support for the grouping of forces.**

Due to the enormous remoteness of the area of military operations, there was the urgent question of seeking out intermediate bases and support points. The U.S. Naval Base on Ascension Island became the basis for this and in the subsequent combat operations this was employed as a transloading point, a place for assembling the personnel and equipment for their deployment and as a place of recreation for the personnel.

Due to the length of the sea lines of communications and the necessity of constantly replenishing the ship supplies, the problem arose of creating a mobile rear which would make it possible for the English assault grouping to operate continuously in the zone of the Falkland (Malvinas) Islands during the entire conflict. The need for constantly replenishing supplies required the use of a large number of supply vessels. On this question, foreign specialists consider it advisable to have as part of the merchant fleet reserve supply vessels which in the event of necessity could also be used for Navy interests. On some of the vessels, it is considered necessary to build platforms for vertical or short take-off and landing (VSTOL) airplanes and helicopters and this increases the number of aircraft-carrying units of a fleet.<sup>8</sup>

Air transport was an important means for delivering personnel and cargo to the area of the conflict. Not counting the U.S. air transports, the English C-130 Hercules and VC-10 aircraft made more than 600 sorties and transported over 5,000 passengers and 7,000 tons of cargo from Great Britain to Ascension Island.<sup>9</sup>

**In the foreign military press, great attention has been given to analyzing the particular features of employing the armed services and branches of troops in the Anglo-Argentine conflict.** It has been pointed out, in particular, that in the course of combat operations there were no direct engagements of surface vessels. After the loss of the cruiser "General Belgrano," the Argentine Command, fearing further losses, withdrew the ships from the area of the conflict. The basic tasks were carried out by the English side by the forces of carrier-based aviation. Its effective use had a significant influence on the nature and specific results of the military operations. **Aviation** was employed both for carrying out missions in the interests of the other branches of forces as well as for conducting independent operations. The most important tasks for the aviation were: the struggle for supremacy at sea and in the air, air defense for the force during the crossing at sea and in the areas of combat maneuvering, participation in the blockading of the islands, attacking military installations and the administrative center on the islands, the landing of helicopter assault forces, support for the troops on the shore, the conducting of air reconnaissance, the ferrying of troops and so forth.

Prior to the capturing of beachhead in the area of San Carlos and the building of runways there, basically only carrier-based aircraft could participate in combat operations. As a total in the course of combat operations, the English used 51 aircraft.<sup>10</sup> In the struggle to win air supremacy, the command used the technical and tactical advantages of the VSTOL aircraft and the capabilities of their mobile basing. At the same time that Argentine aviation which significantly surpassed the English in number made 455 combat sorties over the period of combat operations, the English aviation made more than 2,000 of them.<sup>11</sup> Here each English aircraft made an average of 6 sorties per 24 hours lasting 90 minutes each, and each pilot made 3 or 4 sorties.<sup>12</sup>

The countering of airborne aircraft was of a specific sort. There were virtually no close engagements. The basic ploy was to destroy enemy aircraft by using missiles at large ranges. Of the 31 Argentine aircraft shot down in air engagements by English pilots, 24 were hit with missiles (a total of 27 of them were launched) and 7 by the firing of 30-mm cannons.<sup>13</sup>

In addition to the carrier-based aviation, the Vulcan strategic bombers also participated in raids against the East Falklands. For the first time in military practice, they operated in zones which were a distance of 4,000 miles away from the nearest base. As a total in the course of the conflict, 5 solitary sorties were made including 3 sorties for attacking the airfield at Port Stanley together with the VSTOL aircraft. The bombing tactics was as follows: at a distance of around 200 miles from the target, the last midair fueling was made, after which the aircraft descended and flew at a low altitude outside the zone of the radar field, but ahead of the target it climbed. After bombing from medium altitudes the aircraft again descended to a maximum low one.

In each of the first two raids against the runway, 21 1,000-pound bombs were dropped and these were to fall diagonally across the runway. However, the results of the raids were low. In the first raid, one of the bombs struck the center of the runway, while another hit the edge. The second strike was completely unsuccessful as not any of the bombs hit the target. For deceiving the English the Argentines resorted to a trick: on the runway they built circles of earth and sand which on the reconnaissance photographs appeared as bomb craters. The enemy, having decided that the runway had been damaged, broke off the bombing of it.

As foreign military specialists feel, one of the most vulnerable places of the English Air Force during the conflict was the insufficient number of tactical reconnaissance aircraft. For this reason, the command of the operational force was unable to promptly analyze the results of the air strikes. As a result of the obtained experience, Great Britain is presently developing a version of a tactical reconnaissance aircraft based on the Tornado combat aircraft.<sup>14</sup>

The lack of long-range radar detection equipment on the ships of the operational force created difficulties in organizing the receiving of information on the tactical situation. In the aim of broadening the radar coverage zone and creating a system of detection, identification and warning of the ships about the surface and air situation, the English command employed in the distant and middle zones (at a distance of up to 220 miles from the Falklands) several antimissile frigates and destroyers as radar picket boats as well as the Nimrod MR.2 reconnaissance aircraft from the 18th Air Group. Two reequipped Sea King ASW helicopters operated in the near zone.<sup>15</sup>

According to data in the foreign press, considering the experience acquired, the command of the Royal Air Force has adopted a number of measures aimed at the greater effectiveness of the combat employment of aviation. Among these are:

- 1) Providing the naval forces with early radar detection aircraft. For this purpose, they have proposed using modified Sea King helicopters equipped with search radars. Proposals have also been made to employ balloons, dirigibles and so forth for this;
- 2) Improving the ECM systems for countering low-flying missiles of the Exocet type;
- 3) Improving the systems and weaponry of the Sea Harrier and Harrier aircraft in the aim of providing an opportunity of detecting and hitting targets at a large range in the lower hemisphere. This can be achieved by modifying the radars and incorporating the Sky Flash missiles in the weaponry;
- 4) Extensively employing on Air Force and Navy aircraft weapons which are launched outside the enemy air defense zone, in particular the Sea Eagle antiship missiles.

The low results of the bombing raids against the Port Stanley airport led to the conclusion on the need for the rapid development in the NATO armies of weapons designed to destroy runways such as a canister with cluster weapons.

In the employment of the Argentine aviation, the most characteristic was the fact that along with the most modern types of weapons and military equipment (the Super Entendard aircraft with the AM.39 Exocet missiles), old aircraft were also employed in combating the enemy ships. On comparatively obsolete Skyhawk and Mirage fighter bombers, the Argentine pilots rather successfully crossed the air defense of the English ships and attacked them with conventional 500-kg high-explosive bombs from maximum low altitudes. They sank the destroyer "Coventry," the frigates "Antilope" and "Ardent" as well as the large tank landing craft "Sir Galahad." In addition, bomb hits were noted on 14 of the 23 combat ships comprising the nucleus of the English attack forces.<sup>16</sup>

The concluding stage of the conflict was the conducting of an amphibious landing operation. Preparations for it were rather extended and included: preparatory air and artillery softening-up, minesweeping in the coastal zone, reconnaissance of the landing areas, the preparation of the personnel and equipment and a number of other measures.

Regardless of the extended stay of the amphibious landing forces in the area of the conflict and the open statements on the landing being readied, the command of the English operations force succeeded in achieving surprise. This was achieved by the carrying out of operational camouflage and deception measures: by the establishing of "air control zones," by making strikes against points where a landing was not being planned, by conducting reconnaissance of the coast of the archipelago along a broad front, by the forming of three landing detachments (a basic one and two feints) and by the landing of the basic forces of the party during darkness within a single night.

The landing was carried out on an unequipped coast using landing craft and transport-landing helicopters. It was carried out under bad weather conditions, but with virtually no resistance. Artillery and air softening-up was conducted immediately before the offensive. Fire correction was provided from observation posts positioned on prevailing heights or from helicopters, while guidance of aircraft to targets was provided by forward air spotters who were in the battle formations of the advancing subunits.

The combat operations of the sides on the East Falkland were not marked by activeness and decisiveness. English tactics consisted in "advancing slowly toward the Argentine positions and gradually acquiring the necessary advantages."<sup>17</sup> The "commando" subunits operated more actively and these landed in small groups, they conducted reconnaissance, destroyed communications lines, led aircraft to targets using lasers, they captured the prevailing heights and assisted the successful advance of the basic forces.

An important factor in the successful conduct of the landing operation, in the views of the foreign specialists, was the professional training which the personnel of the English troops obtained not only in the course of national and NATO exercises, but also in pulative operations. Many English senior officers had participated in combat operations in Aden, Kenya, Malaya, Borneo and in other nations.

In the foreign press, great attention was also given to analyzing the damage sustained by the ships and vessels as well as to the reasons for their great losses. On the basis of the conclusions drawn from the lessons of the conflict, the British shipbuilding program has been revised. The most efficient Seawolf anti-aircraft missile complexes, new artillery systems with a high rate of fire and more advanced radars are rapidly being installed on the fighting ships.

In the building of merchant and passenger vessels, it has been proposed that they strictly observe the demand of designing considering their possible reequipping in a brief period of time and use as military transports and support vessels and in the building of fighting ships the number of superstructures from light alloys is to be minimized in order to avoid their igniting in fires.

Regardless of the significant saturating of the modern ships and aircraft with radio electronic equipment, in the opinion of foreign specialists, the number of ECM systems and modern navigation equipment both on the airplanes as well as the helicopters and ships should be increased. Here, the experience of combat operations has confirmed the importance of observing the demands of electromagnetic compatibility among the radio-electronic devices which create the conditions for interference-free operation of all types of radars, radio communications and weapons control systems.

One of the conclusions which the foreign military specialists have drawn from the Anglo-Argentine conflict is that the political, diplomatic, military and military-economic aid from the United States to the Thatcher government was a crucial factor influencing the course and outcome of military operations in the South Atlantic.

An important conclusion reached by American military specialists is that without the creation of an intermediate base on Ascension Island, Great Britain "could never have been victorious in the Falkland Operation." They consider this conclusion particularly important in terms of the Rapid Deployment Forces and assume that the "question of creating secure military bases in the Persian Gulf zone will be given even greater importance."<sup>18</sup>

To achieve the political aims of the military conflict, the British government was ready to resort to any measures, even employing nuclear submarines and nuclear weapons. For the first time in the postwar history of local wars, nuclear submarines were involved to carry out combat missions. Nuclear weapons were carried on the ships of the English attack force. The commander, as was pointed out by the WASHINGTON POST, could issue orders for their employment in the event of "serious circumstances." In the opinion of the West

German magazine DER SPIEGEL, the "threat of destruction of the English fleet" as a result of massed attacks by the Argentine Air Force could become such a "circumstance." For this reason, the "small war" could grow into a nuclear one.<sup>19</sup>

At present, the "Falkland military campaign" is being employed by the Thatcher government not only for increasing a chauvanistic, militaristic mood, but also for escalating military preparations. The British Ministry of Defense has demanded an additional 1 billion pounds sterling for new types of weapons.<sup>20</sup>

By force of arms, Britain has kept its colonial domination over the Falkland (Malvinas) Islands. This again has confirmed the correctness of the Marxist-Leninist conclusion on imperialism as a source of international tension and wars. The stubborn reticence of the British government to consider the will of peoples and to abandon the policy of neocolonialism is fraught with new dangerous conflicts.

#### FOOTNOTES

- <sup>1</sup> U.S. NEWS AND WORLD REPORT, 16 June 1982, p 37.
- <sup>2</sup> INTERNATIONAL DEFENSE REVIEW, Vol 15, No 6, 1982, pp 685-686.
- <sup>3</sup> L'EXPRESSE, No 1618, 1982, p 37.
- <sup>4</sup> See: MORSKOY SBORNIK, No 11, 1982, p 87.
- <sup>5</sup> JOURNAL OF THE ROYAL UNITED SERVICES INSTITUTE FOR DEFENSE STUDIES, Vol 123, No 3, 1982, p 48.
- <sup>6</sup> TIME, 28 June 1982, p 28.
- <sup>7</sup> ÖSTERREICHISCHE MILITÄRISCHE ZEITSCHRIFT, No 4, 1982, p 312.
- <sup>8</sup> JOURNAL OF THE ROYAL UNITED SERVICES INSTITUTE FOR DEFENSE STUDIES, Vol 123, No 3, 1982, p 50.
- <sup>9</sup> INTERNATIONAL DEFENSE REVIEW, Vol 15, No 8, 1982, p 979.
- <sup>10</sup> AIR ET COSMOS, No 917, 28 August 1982, pp 33-35.
- <sup>11</sup> Ibid.
- <sup>12</sup> Ibid.
- <sup>13</sup> Ibid.
- <sup>14</sup> AVIATION WEEK AND SPACE TECHNOLOGY, 26 July 1982, pp 24-25.
- <sup>15</sup> INTERNATIONAL DEFENSE REVIEW, Vol 15, No 8, 1982, p 978.
- <sup>16</sup> DER SPIEGEL, No 31, 1982, pp 96-98.

<sup>17</sup> ÖSTERREICHISCHE MILITÄRISCHE ZEITSCHRIFT, No 4, 1982, p 316.

<sup>18</sup> INTERNATIONAL DEFENSE REVIEW, Vol 15, No 6, 1982, p 686.

<sup>19</sup> KRASNAYA ZVESDA, 30 May 1982.

<sup>20</sup> KRASNAYA ZVEZDA, 15 January 1983.

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